

10/782,363

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	139	TRITHIOCARBONATE AND POLYMER	USPAT	OR	OFF	2006/02/22 08:44
S2	640	260/79	USPAT	OR	OFF	2005/11/21 09:59
S3	1	("6031201").PN.	USPAT	OR	OFF	2006/02/15 13:32
S4	384	LAI.IN. AND POLYMER	USPAT	OR	OFF	2006/02/15 13:34
S5	34	S4 AND "2003".PY.	USPAT	OR	OFF	2006/02/15 13:34
S6	0	LAI.IN. AND "2003".IN.	USPAT	OR	OFF	2006/02/15 13:35
S7	0	LAI.IN. AND "2003".IN.	USPAT	OR	OFF	2006/02/15 13:35
S8	11953	LAI	USPAT	OR	OFF	2006/02/15 13:35
S9	2812	LAI.IN.	USPAT	OR	OFF	2006/02/15 13:47
S10	21	US-2520338-\$.DID. OR US-0179623-\$.DID. OR US-3285945-\$.DID. OR US-3285949-\$.DID. OR US-3367992-\$.DID. OR US-3564074-\$.DID. OR US-3770698-\$.DID. OR US-0392849-\$.DID. OR US-4530962-\$.DID. OR US-0476941-\$.DID. OR US-0505551-\$.DID. OR US-0140068-\$.DID. OR US-0157077-\$.DID. OR US-0198510-\$.DID. OR US-5258445-\$.DID. OR US-5280068-\$.DID. OR US-5312956-\$.DID. OR US-5385963-\$.DID. OR US-6380335-\$.DID. OR US-6395850-\$.DID. OR US-6596899-\$.DID.	USPAT	OR	OFF	2006/02/15 13:48
S11	1	("3135716").PN.	USPAT	OR	OFF	2006/02/16 07:41
S12	1	("3179623").PN.	USPAT	OR	OFF	2006/02/16 07:42
S13	1	("3242129").PN.	USPAT	OR	OFF	2006/02/16 07:42
S14	1	("3892819").PN.	USPAT	OR	OFF	2006/02/16 07:43
S15	1	("3928491").PN.	USPAT	OR	OFF	2006/02/16 07:42
S16	1	("4769419").PN.	USPAT	OR	OFF	2006/02/16 07:43
S17	1	("5055515").PN.	USPAT	OR	OFF	2006/02/16 07:44
S18	1	("5140068").PN.	USPAT	OR	OFF	2006/02/16 07:44
S19	1	("5157077").PN.	USPAT	OR	OFF	2006/02/16 07:44
S20	1	("5198510").PN.	USPAT	OR	OFF	2006/02/16 07:45
S21	1	("6153705").PN.	USPAT	OR	OFF	2006/02/16 07:45

EAST Search History

S22	1	("re31310").PN.	USPAT	OR	OFF	2006/02/16 07:46
S23	1161	trithiocarbonate or trithiocarbonates	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 07:47
S24	589	S23 and (vinyl or resin or epoxy or epoxies or resins or resines or polyester or polyesters or polymer or polymers)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 07:48
S25	17	S24 and (tough or toughener or toughened)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:12
S26	3	vinyl adj epoxide adj copolymer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S27	2955	acrylic and copolymer and polyepoxide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S28	1027	S27 and carbonate	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S29	123	S28 and (unsaturated adj monocarboxylic)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:15
S30	1398	558/243 or 525/107 or 525/117 or 525/525 or 525/535	USPAT	OR	OFF	2006/02/21 13:19
S31	1365	S30 and (polymer or polymers or (vinyl adj ester) or resin or resins)	USPAT	OR	OFF	2006/02/21 13:19
S32	1572	558/243 or 525/107 or 525/117 or 525/525 or 525/535	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:19

EAST Search History

S33	1537	S32 and (polymer or polymers or (vinyl adj ester) or resin or resins)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:20
S34	240	S33 and (tough or toughener or toughening or toughened)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:20
S35	1	S34 and (trithiocarbonate or trithiocarbonates)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:21
S36	128	S34 and (carbonate or carbonates or thiocarbonate or thiocarbonates)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:22
S37	75	S36 not ((sodium adj carbonate) or (potassium adj carbonate))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:22

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NEWS 8 DEC 23 IPC reform
NEWS 9 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
NEWS 10 JAN 13 USPAT2
NEWS 11 JAN 13 IPC 8 searching in IFIPAT, IFIUD, and IFICDB
NEWS 12 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
NEWS 13 INPADOC
NEWS 14 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 15 JAN 17 IPC 8 in the WPI family of databases including WPIV
NEWS 16 JAN 30 Monthly answer limit increased
NEWS 17 JAN 31 Monthly current-awareness alert (SDI) frequency
NEWS 18 FEB 21 added to TULISA
NEWS 19 FEB 21 STN Analyst, Version 1.1, lets you share your STN Analyst
NEWS 20 FEB 22 visualization results
NEWS 21 FEB 22 Status of current WO (PCT) information on STN
NEWS 22 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 23 FEB 22 Updates in EPIFULL; IPC 8 enhancements added

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0C(ENG) AND V6.0C(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

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=> S TRITHIOCARBONATE

466 TRITHIOCARBONATE
1 TRITHIOCARBONATES

L1 466 TRITHIOCARBONATE
(TRITHIOCARBONATE OR TRITHIOCARBONATES)

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FULL ESTIMATED COST

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STN SEARCH TRANSCRIPT

10/782,363

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=> S L1 AND POLY?

3807615 POLY?

L2 242 L1 AND POLY?

=> S L2 AND VINYL

339062 VINYL

569 VINYL

339226 VINYL (VINYL OR VINYL)

L3 17 L2 AND VINYL

=> D 1-7 IBIB ABS HITSTR

L3 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:431400 CAPLUS

DOCUMENT NUMBER: 142:463769

TITLE: Preparation of fused thiadiazinediones, particularly dioxothiadiazynaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV

INVENTOR(S):

Hutchinson, Douglas K.; Bellettini, John R.; Betebenner, David A.; Bishop, Richard D.; Borchardt, Thomas B.; Boase, Todd D.; Cink, Russell D.; Flentge, Charles A.; Gates, Bradley D.; Green, Brian E.; Hinman, Mira M.; Huang, Peggy P.; Klein, Larry L.; Krueger, Allan C.; Larson, Daniel P.; Leanna, M.; Robert, Liu, Dachun; Madigan, Darold L.; McDaniel, Keith F.; Randolph, John T.; Rockway, Todd W.; Rosenberg, Teresa A.; Stewart, Kent D.; Stoll, Vincent S.; Wagner, Rolf; Yeung, Ming C.

PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 182 pp.

SOURCE: CODEN: USXKXO

DOCUMENT TYPE: Patent

LANGUAGE: English

PATENT INFORMATION:

PATENT NO.

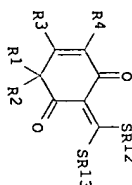
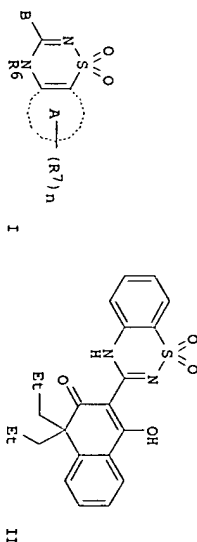
US 2005107364

PRIORITY APPL. INFO.:

OTHER SOURCE(S):

GI

KIND	DATE	APPLICATION NO.	DATE
A1	20050519	US 2004-925072	20040824
US 2005107364		US 2003-497607P	20030825
MARPAT 142:463769			



AB

Thiadiazinediones I [A = mono- or bicyclic aryl, cycloalkyl, heteroaryl, heterocyclyl; B = (un)substituted 5-oxo-1-cyclopenten-1-yl, 6-oxo-1-cyclohexen-1-yl, 7-oxo-1-cyclohepten-1-yl, 6-oxo-1,3-cyclohexadien-1-yl; n = 0-4; R6 = H, (un)substituted alkyl, alkenyl, alkynyl; R7 = NC, OHC, O2N, oxo, halo, (un)substituted alkyl, alkenyl, alkynyl, acyloxy, alkoxy, carbonyloxy, etc.], particularly fused dioxothiadiazynyl-substituted naphthalenones such as II and their enolate anion salts, are prepared as antiviral agents for the treatment of infections involving RNA-containing viral species such as the hepatitis B and C viruses and HIV. Alkylation of Me phenylacetate with allyl bromide and sodium hydride, hydrogenation of the alkenes, ester cleavage with potassium trimethylsilanolate to yield 2-phenyl-2-propylpentanoic acid, conversion of the acid to the acid chloride and acylation of di-Et malonate, acid-catalyzed cyclodehydration, direct amidation of the ester with 2-aminobenzenesulfonamide, and cyclodehydration yields II; treatment of II with aqueous sodium hydroxide in acetonitrile/water yields the enolate anion sodium salt of II.

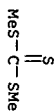
[Bis(alkylthio)methylene]cyclohexenediones III [R1 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R2 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R3 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl, etc.; R4 = H, NC, OHC, halo, O2N, (un)substituted alkoxy, acyloxy, aminocarbonyloxy, sulfonyloxy, aminosulfonyloxy, etc.; R5 = H, heteroaryl, cycloalkyl, cycloalkenyl, or heterocyclyl ring; R12, R13 = alkyl, alkenyl, alkynyl] are claimed. Processes for the preparation of I are also claimed. I inhibit hepatitis C viral RNA polymerase with IC50 values of 2 nM to 500 µM and inhibit hepatitis C replication with EC50 values of between 5 nM and >100 µM. (no data on individual compounds.)

IT

2314-48-9, Dimethyl trithiocarbonate
R1: RCT (Reagent); R2: RCT (Reagent or reagent)

(preparation of fused thiadiazinediones, particularly dioxothiadiazynaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV)

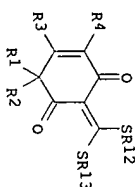
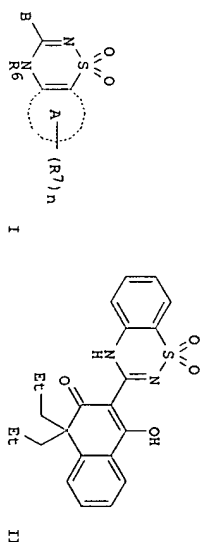
RN 2314-48-9 CAPLUS
CN Carbonotrithioic acid, dimethyl ester (9CI) (CA INDEX NAME)



L3 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:182643 CAPLUS
 DOCUMENT NUMBER: 142:280233
 TITLE: Preparation of fused thiadiazinediones, particularly dioxothiadiazinaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV

INVENTOR(S): Hutchinson, Douglas K.; Bellettini, John R.; Betebenner, David A.; Bishop, Richard D.; Borchardt, Thomas B.; Bosse, Todd D.; Cink, Russell D.; Flentge, Charles A.; Gates, Bradley D.; Green, Brian E.; Hinman, Mira M.; Huang, Peggy P.; Klein, Larry L.; Krueger, Allan C.; Larson, Daniel P.; Leanna, M. Robert; Liu, Dachun; Madigan, David L.; McDaniel, Keith F.; Randolph, John T.; Rockway, Todd W.; Rosenberger, Teresa A.; Stewart, Kent D.; Stoll, Vincent S.; Wagner, Rolf; Yeung, Ming C.
 SOURCE: Abbott Laboratories, USA
 PCT Int. Appl., 384 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION: English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005019191	A2	20050303	WO 2004-US27000	20040819
WO 2005019191	A3	20050519		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: BM, CH, GM, KE, LS, MA, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW				
AZ, BY, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BF, BJ, CF, CG, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPL. INFO.: MARPAT 142:280233			US 2003-647490	A 20030825
OTHER SOURCE(S):				



AB Thiadiazinediones I (A = mono- or bicyclic aryl, cycloalkyl, heteroaryl, heterocyclyl; B = (un)substituted 5-oxo-1-cyclohepten-1-yl, 6-oxo-1,3-cyclohexadien-1-yl; n = 0-4; R⁶ = H, (un)substituted alkyl, alkenyl, alkynyl; R⁷ = NC, OHC, O₂N, oxo, halo, (un)substituted alkyl, alkenyl, alkynyl, acyloxy, alkoxy, carbonyloxy, etc.), particularly fused dioxothiadiazinyl-substituted naphthalenones such as II and their enolate anion salts, are prepared as antiviral agents for the treatment of infections involving RNA-containing viral species such as the hepatitis B and C viruses and HIV. Alkylation of Me phenylacetate with allyl bromide and sodium hydride, hydrogenation of the alkenes, ester cleavage with potassium trimethylsilanolate to yield 2-phenyl-2-propylpentanoic acid, conversion of the acid to the acid chloride and acylation of di-Et malonate, acid-catalyzed cyclodehydration, direct amidation of the ester with 2-amino-2-mercaptoethylamine, and cyclocondensation yields II; treatment of II with aqueous sodium hydroxide in acetonitrile:water yields the enolate anion sodium salt of II. [Bis(alkylthio)methylene]cyclohexenediones III [R¹ = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, amino, carbonyl; R² = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, amino, carbonyl; R³ = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, amino, carbonyl; R⁴ = H, NC, OHC, halo, O₂N, (un)substituted alkoxy, acyloxy, aminocarbonyloxy, sulfonyloxy, aminosulfonyloxy, etc.; R⁵ and R⁶ may form (with the carbons to which they are attached) an aryl, heteroaryl, cycloalkyl, cycloalkenyl, or heterocyclyl ring; R¹², R¹³ = alkyl, alkenyl, alkynyl] are claimed. Processes for the preparation of I are also claimed. I inhibit hepatitis C viral RNA polymerase with IC₅₀ values of 2 nM to 500 μM and inhibit hepatitis C replication with EC₅₀ values of between 5 nM and >100 μM. (no data on individual compds.).

IT 2314-48-9, Dimethyl trithiocarbonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of fused thiadiazinediones, particularly dioxothiadiazinaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV)
 RN 2314-48-9 CAPLUS
 CN Carbonotrithioic acid, dimethyl ester (9CI) (CA INDEX NAME)

MeS-C-SMe

L3 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:491305 CAPLUS
DOCUMENT NUMBER: 139:70127
TITLE: Process for modifying surface of **polymeric**
substrates with photoreactive solutions containing
inorganic photochemical electron donors and their
composites

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Jimg, Nanyong; Van Dyke Tiers, George
3M Innovative Properties Company, USA
PCT Int. Appl., 69 pp.
CODEN: PIXXD2

DOCUMENT TYPE:
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051966	A1	20030626	WO 2002-US33665	20021021
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: CH, CM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003159915	B2	20040622	US 2001-22761	20011214
US 6752894	A1	20030630	AU 2002-353851	20021021
AU 2002353851	A1	20040929	EP 2002-789246	20021021
EP 1461376	A1	20040929	EP 2002-789246	20021021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AU, TR, BG, CZ, EE, SK				
JP 2005511876	TZ	20050428	JP 2003-552839	20021021
PRIORITY APPL. INFO:			US 2001-22761	A 20011214
			WO 2002-US33665	W 20021021

MARPAT 139:70127

OTHER SOURCE(S):
AB The process comprises contacting a **polymer** substrate surface, particularly a fluorinated **polymer** substrate surface (e.g., ethylene tetrafluoride-propylene hexafluoride copolymer (PTFE 6510N)/nylon 12 (Vestamid L 2140)), with a photoreactive solution containing at least one inorganic photochemical electron donor (e.g., sodium sulfide) and a cationic assistant (e.g., tetrabutylammonium bromide) to form an interface, and exposing the interface to actinic radiation. **Polymer** substrates with modified surfaces are effectively bonded to **polymer** films to form composite articles.

IT 534-18-9, Sodium thiocarbonate
RL: TEM (Technical or engineered material use); USES (Uses of photochem. electron donor; process for modifying surface of **polymeric** substrates with photoreactive solns. containing inorg. photochem. electron donors)

RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)

HS-C-SH

2 Na

REFERENCE COUNT: 5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:424513 CAPLUS
DOCUMENT NUMBER: 138:402661
TITLE: Manufacture of **polymers** of water-soluble vinyl monomers with narrow molecular weight distribution

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Hamabe, Hidemori; Ueno, Chie
Kurita Kogyo Co., Ltd., Japan
Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAP

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003160604	A2	20030603	JP 2001-361343	20011127
PRIORITY APPL. INFO:			JP 2001-361343	20011127
AB In polymerization of water-soluble vinyl monomers in aqueous solution in the presence of initiators, reversible addition-fragmentation chain-transfer agents are added to the solution. Thus, acrylamide was polymerized at 60° for 8 h in H ₂ O in the presence of (NH ₄) ₂ S ₂ O ₈ and benzyl dithiobenzoate to give a polymer with Mn 34,900 and Mw/Mn 1.42.				
IT 26504-29-0, Dibenzyl trihydrocarbonate				
RL: RCT (Reactant); NACT (Reactant or reagent)				
(chain-transfer agent; polymerization of water-soluble vinyl monomers in presence of reversible addition-fragmentation chain-transfer agents for narrow mol. weight distribution)				
RN 26504-29-0 CAPLUS				
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)				

Ph-CH₂-S-C-S-CH₂-Ph

L3 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:636908 CAPLUS
DOCUMENT NUMBER: 137:188196
TITLE: Separator with sulfur compound thin film for secondary battery and the battery using it

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Yamada, Kazunori; Kobayashi, Shigeki; Kaimai, Norimitsu; Takita, Kotaro; Kono, Koichi
Tonen Chemical Corp., Japan
Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002237285	A2	20020823	JP 2001-32144	20010208

PRIORITY APPL. INFO.:

OTHER SOURCE(S):

AB The separator has a thin film of 21 S compound selected from R1SR2 (R1-2 = hydrocarbyl), R3SR4 (R3-4 = hydrocarbyl; x = 2-5), R5SO2R6 (R5-6 = hydrocarbyl), S-containing cyclic compds., and crown ethers on one or both sides of a microporous polyolefin film. Batteries having the separator are also claimed. Since decomposition of electrolyte solns. is suppressed by the S compound thin film, the batteries have low irreversible anode capacity and good cycling performance.

IT 822-38-8, Ethylene trithiocarbonate 930-35-8, Vinylene trithiocarbonate

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(separator with S compound thin film on porous polyolefin film for battery with low irreversible anode capacity and good cycling performance)

RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



RN 930-35-8 CAPLUS
CN 1,3-Dithiole-2-thione (9CI) (CA INDEX NAME)



L3 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:353400 CAPLUS
DOCUMENT NUMBER: 136:377478
TITLE: Monomers having electron-withdrawing groups and processes for preparing them

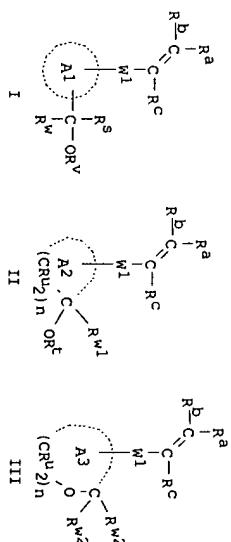
INVENTOR(S): Inoue, Keizo
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 137 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036533	A1	20020510	WO 2001-39530	20011031
W: JP, KR, US				
RM: DE, FR, GB				
EP 1331216	A1	20030730	EP 2001-983793	20011031
R: DE, FR, GB				
US 2003059710	A1	20030327	US 2002-181830	20020723
US 6949615	B2	20050927	JP 2000-331602	20001031

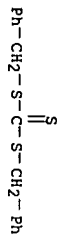
PRIORITY APPL. INFO.: A 20001031

OTHER SOURCE(S): MARPAT 136:377478
GI MO 2001-39530 W 20011031



γ-irradiation is of living character. Under 60Co irradiation, the bonds between benzyl group and sulfur were cleaved, benzyl radicals initiate the polymerization. The propagating radical together with trithiocarbonate radicals form a dormant polymer chain. The fast equilibrium between propagation radical and dormant polymer chain controls the polymerization.

IT 26504-29-0P, Dibenzyl trithiocarbonate
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(mechanism of 60Co γ-irradiation-initiated living free-radical polymerization of vinyl monomers with dibenzyl trithiocarbonate)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> S L2 NOT L3
L4 225 L2 NOT L3

=> S L4 AND (HARD? OR TOUGH? OR TOU? OR HAR?)

557645 HARD?
94353 TOUGH?
132341 TOU?
832989 HAR?
L5 8 L4 AND (HARD? OR TOUGH? OR TOU? OR HAR?)

=> D 1-8 IDIB ABS HITSTR

L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 1982:219353 CAPLUS
DOCUMENT NUMBER: 96:219353
TITLE: Formation of an abrasion-resistant coating film
INVENTOR(S): Kuyama, Masahito; Futagami, Mikiyo
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Fr. Demande, 26 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2487324	A1	19820129	FR 1981-14361	19810723
FR 2487324	B1	19840330		
JP 57028166	A2	19820215	JP 1980-102187	19800724
JP 58013102	B4	19830311		
JP 57028167	A2	19820215	JP 1980-102188	19800724
JP 58013103	B4	19830311		
JP 57028168	A2	19820215	JP 1980-102189	19800724
JP 58013104	B4	19830311		
US 4382983	A	19830510	US 1981-283784	19810715
GB 2080817	B2	19840905	GB 1981-22128	19810717
DE 3129298	A1	19820429	DE 1981-3129298	19810724
DE 3129298	C2	19891109		

PRIORITY APPL. INFO.:

JP 1980-102187 A 19800724
JP 1980-102188 A 19800724
JP 1980-102189 A 19800724

AB Alkali metal salts of thio acids, barbituric acids, and/or 1,3-dicarbonyl compds. are catalysts for curing abrasion-resistant hydrolyzed alkoxy silane coatings. Thus, a mixture of partially hydrolyzed (20.2% SiO₂) 100, Bu acrylate-2-hydroxyethyl methacrylate polymer (25% and H2NCOSEK [74379-80-9]) 1 part was coated on poly(ethylene methacrylate) [9011-14-7] at 20° and 50% relative humidity and baked 1 h at 75° to give a coating with appearance good, crosshatch adhesion 100/100, scratching by steel wool none, pencil hardness 7H, and adhesion after 1 h in H₂O at 80° 100/100.

IT 534-18-9
RL: CAT (Catalyst use); USES (Uses)

RN 534-18-9 CAPLUS
CN Carbonotrithiolic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 1973:160454 CAPLUS
DOCUMENT NUMBER: 78:160454
TITLE: Preparation of poly(isocyanurate-urethanes)
INVENTOR(S): Allen, Michael George; Tiers, George V. D.
PATENT ASSIGNEE(S): U.S.' 5 pp.
SOURCE: Minnesota Mining and Manufacturing Co.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
US 3715337 A 19730206 US 1971-148938 19710601
PRIORITY APPL. INFO.: US 1971-148938 A 19710601
AB Polyisocyanurates or poly(isocyanurate-urethanes) were prepared by treating the polyisocyanates with polyols in the presence of Na dodecyl trithiocarbonate (1) [40195-97-9].

Thus, 2.3 g Na in 70 g dipropylene glycol (II) [25265-71-8] was treated with 20.2 g n-dodecyl mercaptan (112-55-0) and 7.6 g carbon disulfide (75-15-0) to give a 20% I solution in II. A polyisocyanurate, prepared by treating 10 g Mondur MRS (polymethylene polyphenyl polyisocyanate) [37370-30-2] with 0.2 g of the catalyst solution, cured to hardness after 24 hr at room temperature and after 48 min at 100 deg..

IT 40195-97-9
RL: CAT (Catalyst use); USES (Uses)

RN 40195-97-9 CAPLUS
CN Carbonotrithiolic acid, monododecyl ester, sodium salt (9CI) (CA INDEX NAME)

Me-(CH₂)₁₁-S-CS₂H

● Na

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:500847 CAPLUS
DOCUMENT NUMBER: 67:100847
TITLE: Composition comprising chlorinated butyl rubber and a curing system

INVENTOR(S): Bannister, Eric; Biggs, John; Coulson, Samuel H.;
Greenwood, John; Zapp, Robert L.
PATEM ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATEM INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3342789	US	19670919	19620731	

AB Halogenated rubbery polymers having low Mooney viscosity can be cured with suitable curing systems to give mastic compns. with good metal adhesion and hardening properties. Thus, a mastic base composition was obtained by milling together 100 parts chlorinated butyl rubber with 7 parts N,N'-dichloro-5,5-dimethylhydantoin and 0.75 part dicumyl peroxide 10 min. at 300 F. to give a material with Mooney viscosity 10-15 (4 min. at 212 F. large rotor). The mastic base was formulated into a composition containing mastic base 107.75, petroleum resin

25, hydrogenated wood resin ester 10, phenol methylol resin 20, short fiber asbestos 50, CaCO₃ 150, polyisobutylene (mol. weight, approx. 10,000) 10 and light process oil 40 parts. The 2 curing systems tested in the formulation were the suitable curing system: ethylene trithiocarbonate 1, ZnO 5, SnCl₂ 2, salicylic acid 2 parts and the control: 2 parts diethylenetriamine and 5 parts heavy calcined MgO. The adhesion of depolymd. chlorobutyl mixture to Al was 9.7 lb./in. 2 force to sep. 1 in. sq. Al plates in 1 day compared to 5.6 lb./in. 2 for the control. The penetration of the mastic composition was 9.3 mm. after 15 sec. with a 100 g. load using a grease penetrometer compared to 11.9 mm. penetration for the control.

IT 822-38-8

RL: USES (Uses)
(as curing agent in chlorinated butyl rubber mastics)

RN 822-38-8 CAPLUS
CN 1,3-dithiolane-2-thione (9C1) (CA INDEX NAME)



L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:402735 CAPLUS
DOCUMENT NUMBER: 63:2735
ORIGINAL REFERENCE NO.: 63:441C-e
TITLE: Medical use of S-carboxymethyl cysteine
INVENTOR(S): Joullie, Maurice; Laure, Michel; Mallard, Gabriel;

PATEM ASSIGNEE(S): Muller, Pierre
SOURCES: Recherches Pharmaceutiques et Scientifiques
DOCUMENT TYPE: 14 pp.
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: Unavailable
PATEM INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR M3111	FR	19650312	19631202	

AB Medications containing S-carboxymethyl cysteine (I), m. 249-50° (decomposition) (prepared by alkylation of cysteine (II) with an alkali metal monochloroacetate) were stable (in contrast to II) and provided trophic action on fingerhalls. The I.D. 50 of I (intravenous in mice) was 3.1 g./kg.; the intraperitoneal I.D. 50 was too low to be determined in mice, rats, guinea pigs, or rabbits. Subacute toxicity detns. in mice or rats revealed no abnormalities. Various topical formulations containing I at 0.5-10% concentration in a penetrating aqueous excipient [containing glycerol monostearate, hydrogenated lanolin, sorbitol, and Tween 80 (sorbitol poly(oxyethylene) monooleate)] are described. These medications also contained interesterified almond oil, or cholesterol, cholesterol palmitate, thymoxine, or vitamin A palmitate, coloring agents (for the aqueous oil phases), and a quaternary ammonium compound or other preservative (but not Hg derivs., which would react with I). Regular topical application of the medications described to the base of the nails made the nails harder, stronger, and less brittle.

IT 4052-53-3, Zinc thioacetate, ZnCS₃
(protection by polyethylene glycol in viscose in rayon spinning)

RN 4052-53-3 CAPLUS
CN Zinc, [carbonotritrithioato(2-)-S,S']- (9C1) (CA INDEX NAME)



L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1963:9490 CAPLUS
DOCUMENT NUMBER: 58:9490
ORIGINAL REFERENCE NO.: 58:1618B-C
TITLE: Curing agents for elastomeric halogenated olefin copolymers

INVENTOR(S): Cain, William P.; Minckler, Leon, Jr. S.; Makowski, Henry S.
PATEM ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: 4 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATEM INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2996473	US	19610815	19590529	

AB The agents consist of a metal oxide and an organic polythiocarbonate, e.g. ethylene trithiocarbonate (I). The products have better dynamic fatigue and O₃ resistance than those cured with S. Thus, a chlorinated copolymer (made from a 50:50 C2H4-C3H6 feed, containing 8.01% Cl, and having a Harris mol. weight of 40,600) 100 was mixed with semireinforcing furnace black 50, ZnO 5, stearic acid 1, and I 5 parts and cured for 45



mln. at 311°F. Tests in a Goodrich flexometer showed <1/10th as much permanent set and dynamic drift as in a control stock cured with S, tetrachloroethylene disulfide, and benzothiazolyl disulfide. The improvement in O3 resistance was also impressive.

IT 822-38-8, Carbonic acid, trithio-, cyclic ethylene ester
(as curing agent for halogenated polyolefins)

RN 822-38-8 CAPLUS
1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)

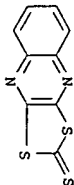
L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1961:139575 CAPLUS
DOCUMENT NUMBER: 55:139575
ORIGINAL REFERENCE NO.: 55:263539-h
TITLE: Control of mildew
INVENTOR(S): Grewe, Ferdinand; Sasse, Klaus; Wegler, Richard
PATENT ASSIGNEE(S): Farbenfabriken Bayer Akt.-Ges.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1100372	DE	19610223	DE	

AB Phytopathogenic fungi, e.g. *Erysiphe polyphaga*, *E. humuli*, and *S. panosa*, are controlled by acylation products of 2,3-quinoxalinedithiol (II), 6-methoxy-1, 6-Me-1, 6-chloro-1, and 5,7-dimethyl. Especially active are compds. prepared by treating the H of the SH groups with esters of chloroformic acid or of thiodioxoacetic acid chlorides, or with COCl₂ or CSOCl₂. The activity of 6-methyl-1,3-dithiolol(4,5-b) quinoxalin-2-one and some derivative, against *E. polyphaga* is described. The products do not harm plants and also have high acaricidal activity.

IT 93-75-4, Carbonic acid, trithio-, cyclic 2,3-quinoxalinediyl ester (in mildew control)

RN 93-75-4 CAPLUS
CN 1,3-Dithiolol(4,5-b) quinoxaline-2-thione (9CI) (CA INDEX NAME)



L5 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1959:7069 CAPLUS
DOCUMENT NUMBER: 53:7069
ORIGINAL REFERENCE NO.: 53:1351b-h
TITLE: Reactions of amines and sulfur with olefins. IV. Chemical and thermal decompositions of N,N'-thiobisamines and their reactions with olefins
SAVILLE, R. W.
JOURNAL OF THE CHEMICAL SOCIETY (1958) 2880-8
CODEN: JCSOAY; ISSN: 0368-1769
DOCUMENT TYPE: Journal

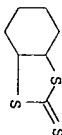
LANGUAGE: Unavailable

AB cf. C.A. 49, 9610C. The procedure of Throdahl and Harman (C.A. 45, 5442g) with (PhCH₂)₂NH and S₂C₁₂ gave 92% ((PhCH₂)₂N)₂S₂ (II), yellow needles, m. 79-80° (alc.-petr. ether); morpholine (III) and S₂C₁₂ gave 82% N,N-disulfide (III), needles, m. 125° (EtOH-EtOAc); and N-ethylpyrazine and S₂C₁₂ gave 66% N,N'-disulfide (IV), prisms, m. 77-9° (EtOH-Me₂CO). BzNHCH₂Ph (10 g.) and 5 g. P₂S₅ in boiling xylene gave 52% PhSCH₂CH₂Ph (V), m. 84-5°, 3-bromocyclohexene (VI) and (H₂N)₂C₆H₄ gave 69% C₆H₉SH, b.p. 144°, n_D 1.5230; 2,4-dinitrophenyl derivative, yellow prisms, m. 114-15° (EtOH-Me₂CO). VI and PhSH in EtOH under N gave C₆H₉SP₂, b.p. 81-89-90°, n_D 1.5920. The procedure of Cummen (C.A. 41, 3447a) gave Ph cyclohexyl sulfide, b.p. 111°, n_D 1.5680; sulfone, m. 73-4°.

Cyclohexene (15 g.), 30 g. PhCH₂SH, and 0.1 g. ascaridole refluxed 7 hrs. gave 45% C₆H₁₁SC₆H₅ (Via), b.p. 81-88-9, n_D 1.5556; sulfone, flakes, m. 100-1° (EtOH-petr. ether). 1-Chloro-2-thiocyanatocyclohexene and Na₂S gave a polymer (VII) and not 1,2-epithiocyclohexene; VII and LiAlH₄ gave material, b.p. 148-50°, which contained some 1,2-C₆H₁₀(SH)₂. Benzyl 1-methylcyclohexyl sulfide and AcO₂H gave the sulfone, flakes, m. 100° (petr. ether-EtOH). I (2 g.) and 50 ml. 15% H₂SO₄ shaken vigorously then kept 2 days at 0° gave 2,7 g. ((PhCH₂)₂N)₂S₂, prisms, m. 143-4° (EtOH); I and warm dilute mineral acids gave S, H₂S, SO₂, and (PhCH₂)₂NH, and I in C₆H₆ and H₂S gave a red insol. oil and S. III (11.8 g.) and 12.4 g. p-MeC₆H₄SH mixed at room temperature gave 5.8 g. II and 14.9 g. residue, undistillable at 140°/0.01 mm., which apparently was (p-MeC₆H₄)₂S₄; other thiols behaved similarly. I was unaffected by LiAlH₄ in Et₂O after 2 hrs. refluxing; in refluxing tetrahydrofuran degradation to (PhCH₂)₂NH, S, and H₂S occurred. III (3.0 g.), 2.5 g. MeCN, and 20 ml. C₆H₆ heated 8 hrs. in vacuo at 140° gave S and bis(α-methylamino-α-morpholinomethyl) sulfide, prisms, m. 150-1° (EtOH); III and PhCH₂CNS gave the benzyl derivative, plates, m. 98° (C₆H₆). I (9.1 g.) under N kept 24 hrs. at 140 ± 0.1° then treated with Et₂OHCN gave (PhCH₂)₂NH, HCl and 6.1 g. V. (PhCH₂)₂NH (VII) 0.3 g. and 2 g. S heated 24 hrs. in vacuo at 140 ± 0.1° then cooled to -10° 2 days gave 4.2 g. V and VII. H₂S, m. 32-4° (sealed tube). IV heated 10 hrs. at 140 ± 0.1 in vacuo gave traces of Et(NCH₂CH₂)₂NH, H₂S and a tar; the same products were obtained from Et(NCH₂CH₂)₂NH and S. I and cyclohexene heated 24 hrs. at 140 ± 0.1° gave V. 2,4-(O₂N)₂C₆H₃Me, VIIa, PhCH₂NH₂, and ((PhCH₂)₂N)₂S₂, m. 109-11° (petr. ether), and other unidentified cyclohexanedithiol derivs. 1-Methylcyclohexene and I gave similar results. EtCH:CH₂ (0.25 mole) and 0.025 mole III stirred at 25° or 65° while diffused with H₂S gave varying amts. of II. From 25 g. MeCH:CH₂CH₂CH₂CH₂ and 12.6 g. III heated 1 hr. at 140° was recovered 10.6 g. III; when the same mixture was refluxed 1 hr. under N while diffused with H₂S there was obtained small amts. of II and unidentified sulfides and polysulfides. Cyclohexene (41 g.), 4.8 g. S, and 11.8 g. III heated 5 hrs. in vacuo at 140 ± 0.1° gave 0.6 g. II, 1.2 g. III, and 10.5 g. polysulfide. The mechanisms of the various reactions involved are discussed.

IT 2164-87-6, Carbonic acid, trithio-, 1,2-cyclohexylene ester (preparation of)

RN 2164-87-6 CAPLUS
CN 1,3-Benzodithiole-2-thione, hexahydro- (9CI) (CA INDEX NAME)



L5 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1957:32428 CAPLUS
DOCUMENT NUMBER: 51:32428
ORIGINAL REFERENCE NO.: 51:6205f-h
TITLE: Inhibiting the polymerization of olefinic compounds
PATENT ASSIGNEE(S): General Tire & Rubber Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

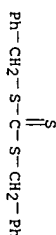
PATENT NO. KIND DATE APPLICATION NO. DATE
GB 754689 19560808 GB
AB Certain polymers, particularly the solid polymers of olefinic compds. which have substantial residual unsatn., continue to polymerize after a polymer of the desired characteristics has been formed. The result is a hardening and gelation of the polymer. Known inhibitors or "shortstops" for high-temperature polymerizations are ineffective for the new latexes synthesized at temps. less than 80°F. The best low-temperature inhibitors are the alkali metal and NH₄ trithiocarbonates. Preferably 0.05-3% of the trithiocarbonate, based on the weight of the polymer, is used as the inhibitor in polyolefinic compds., particularly the rubbery polymers of conjugated diolefinic compds. and other diolefinic compds. having double bonds in the conjugated relation and preferably having less than 7 aliphatic C atoms. When excessive amts. of free radical initiators are used in the polymerization systems, it is desirable to add more of the shortstopping agent. For example, a batch of 1,3-butadiene and styrene was polymerized at 41°F. The batch was shortstopped at the end of the polymerization by the addition of 0.20% Na trithiocarbonate (1). The batch was subjected to further treatment in the polymerizer. At the time of shortstopping the polymerization, the solids content was 22.3%; after treating for 4 hrs., 21.8%; after 12 hrs., 21.3%. When diisopropylbenzene hydroperoxide and triethylenetetramine are used as initiators, 0.30% I is used.
IT 534-18-9. Sodium thiosulfate, Na₂CS₃
RN 534-18-9 CAPLUS
CN Carbonotrithiotic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na
=> S L4 NOT L5
L6 217 L4 NOT L5
=> S L6 AND (EPOX? OR ACRY? OR METHACR? OR UNSAT?)
308139 EPOX?
450448 ACRY?
255040 METHACR?
257023 UNSAT?
L7 49 L6 AND (EPOX? OR ACRY? OR METHACR? OR UNSAT?)
=> D 1-49 IBIB ABS HITSTR

L7 ANSWER 1 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:32286 CAPLUS
DOCUMENT NUMBER: 144:109097
TITLE: Method for producing molecularly imprinted polymers
INVENTOR(S): Sellergren, Boerje; Titicci, M. Magdalena
PATENT ASSIGNEE(S): University of Dortmund INTU, Germany
SOURCE: PCT Int. Appl., 20 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
WO 2006004536 A1 20060112 WO 2005-SE1096 20050704
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RU, SC, SD, SE, SG, SK, SL, SM, SN, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RM: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BM, CH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
AI 20060209 DE 2004-102004032430 20040703
PRIORITY APPLN. INFO.: DE 2004-102004032430A 20040703
AB The invention relates to a method for producing mol. imprinted polymers (MIP) which are applied as a thin film to the surface of a support material, in which a suspension of at least one functional monomer, one template and one initiator is used for the polymerization, and with which RAFT agents are employed.
IT 26504-29-0. Dibenzyl trithiocarbonate
RL: MOA (Modifier or additive use); USES (Uses)
RAFT agent; method for producing molecularly imprinted polymers
RN 26504-29-0 CAPLUS
CN Carbonotrithiotic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



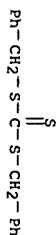
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
L7 ANSWER 2 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1221224 CAPLUS
DOCUMENT NUMBER: 143:460978
TITLE: Hydrogenation or oxidation of polymer latex prepared by controlled emulsion polymerization
INVENTOR(S): Parker, Dane Kenton; Fehér, Frank James; Mahadevan, Viswanath
PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 34 pp.
SOURCE: CODEN: USXXCO
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 200526253	A1	20051117	US 2005-120222	20050502
PRIORITY APPL. INFO.:			US 2004-571869P	P 20040517

AB Synthesizing hydrogenated or epoxidized polymer latex comprises (1) preparing an aqueous polymerization medium from 21 monomer, a polymerization control agent, and an emulsifier, (2) initiating polymerization to produce a latex of unsatd. polymer, (3) treating the latex with (a) oxidant, such as, oxygen, air or hydroperoxides, (b) reducing agent, e.g., hydrazine or hydrazine hydrate, and (c) metal ion activator. Thus, styrene 1000, oleic acid 60.0, dibenzyltrithiocarbonate 7.2, RO (reverse-osmosis) water 4000, potassium persulfate 40.0, tripotassium phosphate 40.0 and potassium hydroxide 16.4 g were stirred and polymerized at 65° for <1.5 h to give a stable and slightly yellow polystyrene latex showing solids 20.6%, Mn 54,000 and PDI 1.17.

IT 26504-29-0. Dibenzyltrithiocarbonate
RL: TEM (Technical or engineered material use); USES (Uses)
(control agent; hydrogenation or epoxid. of polymer)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



L7 ANSWER 3 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1080547 CAPLUS
DOCUMENT NUMBER: 144:23153
TITLE: Synthesis and Evaluation of New Dicarboxylic Acid

Functional Trithiocarbonates: RAFT Synthesis of Telechelic Poly(n-butyl acrylate)s
Wang, Ran; McCormick, Charles L.; Lowe, Andrew B.
Department of Chemistry & Biochemistry and Department of Polymer Science, University of Southern Mississippi, Hattiesburg, MS, 39406, USA
Macromolecules (2005), 38(123), 9518-9525
CODEN: MAMOBX; ISSN: 0024-9297

SOURCE: American Chemical Society

PUBLISHER: Journal

DOCUMENT TYPE: English
LANGUAGE: Journal

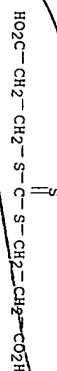
AB We report herein the synthesis of three new diacid functional trithiocarbonates (TTCs) in which the substitution pattern about the TTC functionality is varied and compare their effectiveness alongside examples of previously reported trithiocarbonates as mediating agents in the RAFT polymerization of Bu acrylate. For direct comparative purposes we show that at an initial TTC concentration: initial AIBN concentration

([TTC]₀: [AIBN]₀) of 20 2-(2-carboxyethylsulfanylthiocarbonylsulfanyl)propionic acid (TTC5) and 2-(2-carboxyethylsulfanylthiocarbonylsulfanyl)-2-methylpropionic acid (TTC6) perform as well as 3-benzylsulfanylthiocarbonylsulfanylpropionic acid (TTC3) with respect to kinetics and mol. weight control. In contrast, 2-(1-carboxy-1-methylsulfanylthiocarbonylsulfanyl)-2-methylpropionic acid (TTC1)-mediated homopolymer deviates from "ideal" behavior due, we speculate, to steric crowding of the central TTC core. Addn., 3-(2-carboxyethylsulfanylthiocarbonylsulfanyl)propionic acid (TTC4) fails to confer any control on the homopolymer. of nBA with the polymerization

NOT PRIOR ART, THOUGH

exhibiting complex characteristics, as evidenced in the resulting mol. weight distribution, which may be indicative of hybrid behavior. Subsequently, we examine the effect of [TTC]₀: [AIBN]₀ for TTC5 and TTC6 and show that lower ratios result in faster polymers, consistent with previous reports. Finally, we demonstrate the ability to form block copolymers with high reinitiating efficiency. These new TTCs thus offer access to the direct synthesis of AB diblock dicarboxylic acid telechelic (co) polymers.

IT 15238-06-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and evaluation of new dicarboxylic acid functional trithiocarbonate RAFT agent)
RN 15238-06-9 CAPLUS
CN Propanoic acid, 3,3'-(carbonothioylbis(thio))bis- (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

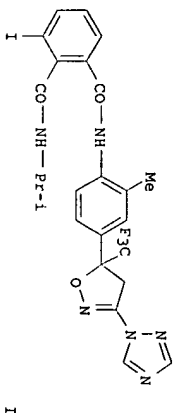
L7 ANSWER 4 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1073977 CAPLUS
DOCUMENT NUMBER: 143:361659
TITLE: Compositions containing benzamides and their application as pesticides

INVENTOR(S): Takai, Shunji
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
Jpn. Kokai Tokkyo Koho, 190 pp.
SOURCE: Patent JKKXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005272443	A2	20051006	JP 2005-38603	20050216
PRIORITY APPL. INFO.:			JP 2004-46912	A 20040223

OTHER SOURCE(S): MARPAT 143:361659

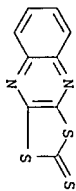


AB New insecticidal, acaricidal, nematocidal, fungicidal, or antibacterial compns. contain 21 benzamide, or salt thereof, and 21 other compound such as aldimorph or diflufenuron. Thus, I + fenprophatin synergistically controlled Carposina niponensis on apple. 93-75-4D, Thiogunox, mixts. with benzamides

IT 93-75-4D, Thiogunox, mixts. with benzamides

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (synergistic insecticides, acaricides, nematocides, fungicides, and antibacterial agents containing benzaldehyde derivs.)

RN 93-75-4 CAPLUS
CN 1,3-dithiolol(4,5-b)quinoxaline-2-thione (9CI) (CA INDEX NAME)



L7 ANSWER 5 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1048469 CAPLUS
DOCUMENT NUMBER: 143:306708
TITLE: Trithiocarbonates for chain transfer agents for RAFT polymerization of acrylic acid, polymers obtained, and their applications

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Coatex, Fr.
FR: Demande, 46 pp.
CODEN: FRXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2868068	A1	20050930	FR 2004-3197	20040329
FR 2868072	A1	20050930	FR 2004-8307	20040728
WO 2005093466	A1	20051013	WO 2005-FR702	20050323
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BM, CH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AZ, BY, KG, KZ, MD, RU, TJ, TR, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NI, SN, TD, TG				

PRIORITY APPL. INFO.:
AB MOCOCRISC(S)SCHRI202M2 (R1 = C2-10 alkyl or (C1-4-alkyl-substituted) aryl, M1, M2 = H, amine salt, ammonium, or alkali metal) are manufactured by reaction of Na2C6S3 or K2C6S3 with MOCOCRISX (M = ammonium or alkali metal, X = halo) and are useful for chain transfer agents in RAFT polym. of acrylic acid (I) in water and copolym. of I with milling aids for mineral materials in aqueous media. 534-18-9, Dipotassium trithiocarbonate 584-10-1, Dipotassium trithiocarbonate
RL: RCT (Reactant); RACT (Reactant or reagent) (bis(carboxyalkyl) trithiocarbonates and salts for chain transfer agents for RAFT polymerization of acrylic acid for polymers useful as dispersants and milling aids for mineral materials)

RN 534-18-9 CAPLUS
CN Carbonotrithiotic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 584-10-1 CAPLUS
CN Carbonotrithiotic acid, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

REFERENCE COUNT: 6
RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT
L7 ANSWER 6 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:921729 CAPLUS
DOCUMENT NUMBER: 143:387401
TITLE: Advances in RAFT polymerization: the synthesis of polymers with defined end-groups

AUTHOR(S):
CORPORATE SOURCE:
SOURCE: Moat, Graeme; Chong, Y. K.; Postma, Almar; Rizzardo, Ezio; Thang, San H.
CSIRO Molecular Science, Clayton, 3168, Australia
Polymer (2005), 46(19), 8458-8468
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

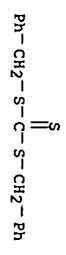
AB A review. An overview discussing recent developments in radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization). Guidelines for the selection of RAFT agents are presented. The utility of the RAFT process is then illustrated with several examples of the synthesis of polymers with reactive end-groups. Thus, RAFT polymerization with appropriately designed trithiocarbonate RAFT agents is successfully applied to the synthesis of narrow polydispersity carboxy-functional poly(methacrylate) and primary amino-functional polystyrene. Methods for removing the thioalkylthio end-group by aminolysis, reduction and thermal elimination are discussed. It is shown that the thioalkylthio end-group can be cleanly cleaved by radical induced reduction with tri-n-butylstannane, to leave a saturated chain end, or by thermolysis, to leave an unsatd. chain end.
IT 15644-49-2, Trithiocarbonate
RL: MSC (Miscellaneous)
(RAFT agents; synthesis of polymers with defined end-groups via RAFT polymerization)

RN 15644-49-2 CAPLUS
CN Carbonotrithiotic acid (9CI) (CA INDEX NAME)



and addnl. H-terminated chains. By quantifying the different end-groups, it was possible to demonstrate that fragmentation is the rate limiting step in the transfer reaction.

IT 26504-29-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(Unexpected end-groups of poly(acrylic acid) prepared by RAFT polymerization)
RN 26504-29-0 CAPLUS
CN Carbonotrithiolic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

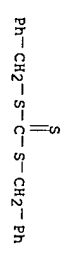
L7 ANSWER 10 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:534013 CAPLUS
DOCUMENT NUMBER: 141:89558
TITLE: Controlled emulsion polymerization
INVENTOR(S): Parker, Dane Kenton; Feher, Frank James; Mahadevan, Vasanath
PATENT ASSIGNEE(S): The Goodyear Tire & Rubber Company, USA
SOURCE: U.S. Pat. Appl. Publ., 30 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127634	A1	20040701	US 2003-721718	20031125
US 6992156	B2	20060131		
WO 2004060928	A1	20040722	WO 2003-US41104	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LI, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SI, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: BW, GH, GM, KE, LS, MM, MZ, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
EP 1581562	A1	20051005	EP 2003-814933	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005829257	A1	20051222	US 2005-186305	20050721
PRIORITY APPL. INFO.:			US 2002-437542P	P 20021231
			WO 2003-721718	A 20031125
			WO 2003-US41104	W 20031223

AB The present invention discloses an emulsion polymerization process that comprises: (1) preparing an aqueous polymerization medium which is comprised of (a) at least one monomer, (b) a polymerization medium which is comprised of an emulsifier, wherein the emulsifier is prepared in-situ within the aqueous polymerization medium; and (2) initiating polymerization of said monomer within the aqueous polymerization medium. The subject invention more specifically reveals an emulsion polymerization process that comprises: (1) preparing a monomer solution which is comprised of (a) at least one monomer, (b) a conjugate acid of a surfactant with a pKa of less than 14, and (c) a controlled free radical polymerization agent; (2) preparing

an aqueous medium which is comprised of (a) water, and (b) a conjugate base of a weak acid wherein the pKa of the base is less than 14; and (3) mixing the monomer solution with the aqueous medium under conditions that result in the

in-situ formation of an emulsifier, and (4) initiating free radical polymerization
IT 26504-29-0, Dibenzyl trithiocarbonate
RL: RCT (Reactant); RACT (Reactant or reagent)
(chain transfer agent; surfactant systems for in-situ emulsification in styrene for controlled emulsion polymerization)
RN 26504-29-0 CAPLUS
CN Carbonotrithiolic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

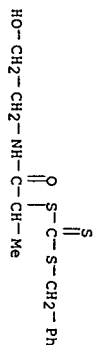


L7 ANSWER 11 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:174985 CAPLUS
DOCUMENT NUMBER: 140:357772
TITLE: Synthesis of Comblike Poly(butyl methacrylate) Using Reversible Addition-Fragmentation Chain Transfer and an Activated Ester

AUTHOR(S): Vostloo, Johannes J.; Tonge, Matthew P.; Fellows, Christopher M.; D'Agosto, Franck; Sanderson, Ronald D.; Gilbert, Robert G.
CORPORATE SOURCE: Key Centre for Polymer Colloids, School of Chemistry, University of Sydney, Sydney, NSW 2006, Australia
SOURCE: Macromolecules (2004), 37(7), 2371-2382
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Comblike polymers of poly(Bu methacrylate) were prepared using an activated ester-type comonomer (N-acryloxysuccinimide, NAS) to generate branch points. The conventional solution free-radical copolymerization of Bu methacrylate (BMA) and NAS were first investigated by following individual monomer consumption rates by ¹H NMR spectrometry and reactivity ratios of BMA and NAS determined using the terminal model. The reactivity ratios so obtained are both close to 0.2; the joint confidence interval is also determined. Reversible addition-fragmentation chain transfer (RAFT) was

then used to grow polymers with controlled backbone and branch chain length. Because both reactivity ratios have similar values, this implies that the copolymer will have a random distribution of NAs and hence of branch points. RAFT-mediated polymerization was first used to synthesize linear poly(BMA-co-NAS) chains. Primary hydroxy-functionalized RAFT agents were then immobilized on this linear poly(BMA-co-NAS) through nucleophilic substitution on the activated ester units of the NAS. From these immobilized RAFT agents, branches were grown upon addition of a further aliquot of monomer (BMA) and initiator (AIBN). The amount of NAS in the starting BMA/NAS composition varied without adversely affecting the uniformity of the NAS distribution along the resulting linear poly(BMA-co-NAS) backbone. This results in branched polymers whose mol. weight, branching d., and d.p. of branches are all relatively narrow and controlled. 558484-26-7DP, reaction products with Bu methacrylate-N-acryloxysuccinimide copolymer
IT RAFT (Properties); SPN (Synthetic Preparation); PREP (Preparation) (synthesis, mol. weight, and NMR spectra of comblike poly(Bu

RN	558484-26-7	CAPLUS
CN	Carbonoctrithioic acid, 2-(2-hydroxyethyl)amino)-1-methyl-2-oxoethyl phenylmethyl ester (9CI)	(CA INDEX NAME)



REFERENCE COUNT:

74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 49 CAPLUS COPYRIGHT 2006 ACS on STNTR
ACCESSION NUMBER: 2003:841654 CAPLUS
DOCUMENT NUMBER: 140.01014

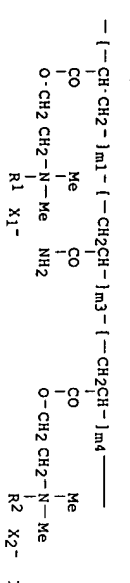
TITLE:

INVENTOR(S) :

PATENT ASSIGNEE(S): Hubei University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.

DOCUMENT TYPE:	Patent
LANGUAGE:	Chinese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1385376	A	20021218	CN 2002-115577	20020614
PRIORITY APPLN. INFO.:				
CI			CN 2002-115577	20020614



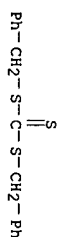
AB The cationic polymer flocculating agent having general formula (II), where: R1=C4-16 alkyl or quaternary NH4+ group; R2=C1-9 alkyl group; X1=H; X2=Cl; ml, m3=2-105; m2=2-107; and n=2-65, is prepared by allowing to react (methacryloyloxyethyl)dimethylammonium X1- with dibenzyl triethiconate, at a molar ratio of 1:(0.30-2.5)X10-3, in H2O at 50-70° for 2-24 h to obtain emulsifier; and then allowing to react with polyacrylamide and (methacryloyloxyethyl)dimethylammonium X2- in solvent (such as H2O, cyclohexane, white oil, aviation kerosene, n-BuOH, and/or isooctyl a.l.c.) in the presence of nonionic emulsifier (such as Span-80, Tween-20, or Tween-80) and azobisisobutyronitrile at 50-80° for 5-24 h.

IT 26504-29-0, Dibenzyl triethiconate

RI: NUU (Other use, unclassified); RCT (Reactant); BACR (Reactant or reagent); USSS (Uses)

(cationic polymer flocculating agent with high performance in water treatment and its preparation)

CA INDEX NAME	(CA INDEX NAME)
Carbonotrithioic acid, bis(phenylmethyl) ester (9CI)	
26504-29-0	CAPLUS
RN	
CN	



L7 ANSWER 13 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:661417 CAPLUS
DOCUMENT NUMBER: 139:381630
TITLE: Synthesis of polymethinotetra

TITLE: Synthesis of polymethinetetrathiafulvalenes by dimerization of ω -(1,3-dithiol-2-ylidene

AUTHOR(S) : Carotinoid and supracarotenoid tetrathiafulvalenes
Maerkl, Gottfried; Aschenbrenner, Norbert; Baur,

CORPORATE SOURCE:

SOURCE: Helvetica Chimica Acta (2003), 86(7), 2589-2609
CODEN: HCHACT; ISSN: 0010-010X

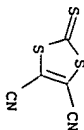
PUBLISHER:

LANGUAGE:

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The dimerization of aldehydes via their unstable thioaldehydes giving 1,3-dithietanes, which undergo sulfur extrusion to give alkenes is used for a new, general synthesis of tetraethialkenes with **polymethine** spacers. In the presence of the Lawesson reagent, the 2-(ω -oxopolyenyldiene)-1,3-dithiol-4,5-dicarbonyltrifiles I [X1 = (CH:CH) n (E)-all; R1 = CN; n = 0 - 5] and II [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E)-all; R1 = CN; n = 0, 1] and the ω -(1,3-benzodithiol-2-yliden) **polyenals** I [X1 = (CH:CH) n (E)-all; R1R1 = CH:CHCH:CH; n = 0, 1] and II [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E)-all; R1R1 = CH:CHCH:CH; n = 0, 1] can be dimerized via the thioaldehydes. The aldehydes I [X1 = (CH:CH) n (E)-all; R1 = CN; n = 0 - 5] and II [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E)-all; R1 = CN; n = 0 - 5], 2,7-dimethylhepta-2,4,6-trienaldehyde [all-(E)-OHC(CH:CH)CHO, n = 0 - 5], 2-thioxo-1,3-dithiol-4,5-dicarbonyl and 2 mol of triphenylphosphine. The ω -(1,3-benzodithiol-2-yliden) **polyenals** I [X1 = (CH:CH) n (E)-all; R1R1 = CH:CHCH:CH; n = 0 - 5] and II [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E)-all; R1R1 = CH:CHCH:CH; n = 0, 1] were prepared by the Wittig reaction of the dialdehydes with 1 mol of (1,3-benzodithiol-2-yl)tributylphosphoniumtetrafluoroborate. Starting from the corresponding aldehydes I [X1 = (CH:CH) n (E)-all; R1 = CN; n = 0 - 5] and II [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E)-all; R1 = CN; n = 0, 1], the **polymethineacetate-1,3-bisulavalenes** III [X1 = (CH:CH) n (E); R1 = CN; n = 3] and IV [X2 = (CHOMe:CHCH:CHCH:CMcCH n (E); R1 = CN; n = 0, 1] with conjugated 16 and 32 **polymethine** chains become available, which we call carotenoid and supercarotenoid tetraethialkenes. The (benzodithiol-2-yliden)acetaldehyde I [X1 = (CH:CH) n (E); R1R1 = CH:CHCH:CH; n = 0] and -butenal I [X1 = (CH:CH) n (E); R1R1 = CH:CHCH:CH; n = 1] are dimerized to give the tetraethialvalenes III [X3 = bond, (CH:CH) n (E); n = 0, 1] with 4 and 8 methine C-atoms, resp.. In case of



II [X2 = (CHCMe:CHCH:CHCMeCH)n-(E)-all; R1 = CN; n = 0, 1], the
Lamesson method fails, the dimer IV [X2 = (CHCMe:CHCH:CHCMeCH)n-(E)-all;
R1 = CN; n = 1] with 16 methine C-atoms can be obtained from II [X2 =
(CHCMe:CHCH:CHCMeCH)n-(E)-all; R1 = CN; n = 1] via the McMurry
reaction. The intermediate thioaldehydes can be intercepted by the
formation of Diels-Alder adducts with hexachlorocyclopentadiene and
hexa-2,4-diene. The redox potentials E1/2 of the described
polyethinethiathiafulvalenes are reported.
IT 1005-10-3, 2-Thioxo-1,3-dithiole-4,5-dicarboxylic
R1: RCT (Reactant); RACT (Reactant or reagent)
(preparation, half-wave reduction potential, and UV spectra of carotenoid
and
supracarotenoid tetrathiathiafulvalenes by dimerization of
ω-(1,3-dithiol-2-ylidene) **polyenals** with the
Lamesson-reagent)
RN 1005-10-3 CAPLUS
CN 1,3-Dithiole-4,5-dicarboxylic, 2-thioxo- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 48

THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 14 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN

DOCUMENT NUMBER: 2003-532695 CAPLUS

INVENTOR(S): 139-101540

TITLE: Aqueous dispersions of **polymer** particles

Such, Christopher Henry; Rizzardo, Ezio; Serrells,
Algridas Kazimieras; Hawke, Brian Stanley; Gilbert,
Robert John
Robert John

PATENT ASSIGNEE(S): University of Sydney, Australia

SOURCE: PCT Int. Appl., 90 pp.

DOCUMENT TYPE: CODEN: PIXXD2

LANGUAGE: Patent
English

FAMILY ACC. NUM. COUNT: 1

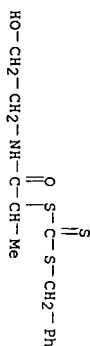
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200305919	A1	20030710	WO 2002-AU1735	20021220
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR,				
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH,				
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,				
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,				
CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
CA 2470822	AA	20030710	CA 2002-2470522	20021220
AU 2002350285	A1	20030715	AU 2002-350285	20021220
EP 1463765	A1	20041006	EP 2002-784927	20021220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, IS, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002015285	A	20041116	BR 2002-15285	20021220
JP 2005013252	T2	20050512	JP 2003-556449	20021220

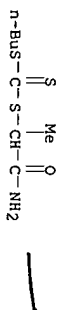
CN 1625571 A 20050608 CN 2002-827521 20021220
ZA 2004004992 A 20050215 ZA 2004-4992 20040624
PRIORITY APPL. INFO.: AU 2001-9708 A 20011221
AU 2002-950772 A 20020814
WO 2002-AU1735 W 20021220

OTHER SOURCE(S): MARPAT 139:101540

AB The invention provides a method for preparing an aqueous dispersion of
polymer particles comprising the following steps: (i) preparing a
dispersion having a continuous aqueous phase, a dispersed organic phase
comprising one or more ethylenically **unsatd.** monomers, and an
amphiphilic RAFT agent such as an adduct of 2-[(2-
phenylethanesulfonyl)sulfanyl]propanoic acid and **acrylic** acid-Bu
acrylate block copolymer as a stabilizer for said organic phase, and
(ii) **polymerizing** said one or more ethylenically **unsatd.**
monomers under the control of said amphiphilic RAFT agent to form said aqueous
dispersion of **polymer** particles, novel amphiphilic RAFT agents
for use in this method, novel RAFT agents useful in making these
amphiphilic RAFT agents and methods for their manufacture. Use of the
amphiphilic RAFT agent allows performing conventional emulsion
polymer without need of conventional surfactants.
IT 558484-26-77, Benzyl 2-[(2-hydroxyethyl)amino]-1-methyl-2-oxoethyl
trithiocarbonate
RL: IMF (Industrial manufacture); PREP (Preparation)
(amphiphilic RAFT agent precursor; manufacture of aqueous dispersions of
polymer particles using adducts of dithiocarbonylates and
polymers of ethylenically **unsatd.** monomers as
amphiphilic RAFT agents)
RN 558484-26-7 CAPLUS
CN Carbonotrithiotic acid, 2-[(2-hydroxyethyl)amino]-1-methyl-2-oxoethyl
phenylmethyl ester (9CI) (CA INDEX NAME)

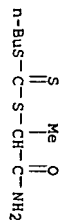


HO-CH2-CH2-NH-C(=S)-CH2-CH2-Ph
IT 558484-25-69, 2-amino-1-methyl-2-oxoethyl butyl trithiocarbonate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(amphiphilic RAFT agent precursor; manufacture of aqueous dispersions of
polymer particles using adducts of dithiocarbonylates and
polymers of ethylenically **unsatd.** monomers as
amphiphilic RAFT agents)
RN 558484-25-6 CAPLUS
CN Carbonotrithiotic acid, 2-amino-1-methyl-2-oxoethyl butyl ester (9CI) (CA
INDEX NAME)



n-Bu-S-C(=S)-CH2-CH2-NH2
IT 558484-25-69, 2-amino-1-methyl-2-oxoethyl butyl trithiocarbonate,
reaction products with **polymers** of ethylenically **unsatd.**
monomers
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(manufacture of aqueous dispersions of **polymer** particles using adducts
of dithiocarbonylates and **polymers** of ethylenically
unsatd. monomers as amphiphilic RAFT agents)
RN 558484-25-6 CAPLUS

CN Carbonotrithiolic acid, 2-amino-1-methyl-2-oxoethyl butyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:491304 CAPLUS
DOCUMENT NUMBER: 139:70097
TITLE: Process for modifying polymer surfaces with inorganic compounds to improved adhesion to other materials

INVENTOR(S): Jing, Naiyong; Van Dyke Tiers, George
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051965	A1	20030626	WO 2002-053352	20021021
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
US 2003162022	A1	20030828	US 2001-23271	20011214
US 6844030	B2	20050118		
AU 2002360288	A1	20030630	AU 2002-360288	20021021
EP 1453896	A1	20040908	EP 2002-795536	20021021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IL, IT, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005311875	T2	20050428	JP 2003-552838	20021021
PRIORITY APPL. INFO.:			US 2001-23271	A 20011214
			WO 2002-053352	W 20021021

AB In the title process, the inorg. compds. are nonvolatile photochem. electron donor salts and are applied as solns. in the presence of actinic radiation. Polymeric substrates with modified surfaces are effectively bonded to polymer films to form composite articles. Thus, FEP X6307 (tetrafluoroethylene-hexafluoropropylene copolymer) film was contacted with a glass slide flood coated with a solution containing 0.2 g Na2S.9H2O and 6 g H2O while being irradiated by UV light (λ 254 nm) for 10 min. The resulting treated film exhibited advancing contact angle 78° and peel adhesion 3.5 lb/in after thermally bonded with nylon 12 film.

IT 534-18-9, Sodium thiocarbonate
RM (modifying polymer surfaces with inorg. nonvolatile photochem. electron salts in presence of UV radiation to improved adhesion to other materials)

RN 534-18-9 CAPLUS

CN Carbonotrithiolic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:411926 CAPLUS
DOCUMENT NUMBER: 139:8231
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKKXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003155454	A2	20030530	JP 2001-353753	20011119
PRIORITY APPL. INFO.:			JP 2001-353753	20011119
AB The coatings contain (a) 5-30% (as solid) water-thinned polymer dispersions, (b) 0.1-20% silica particles, and (c) 0.01-5% guanidine compds. Thus, a water-thinned composition containing (a) a reaction product of Kanabiol KD 5 (acrylic polymer), hydrocarbonated bisphenol A diglycidyl ether, and 3-glycidyloxypropylmethyldimethoxysilane, (b) Snowtex N (silica), and (c) dipropoxybis(tetraethanolamino)titanium, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.				
IT 822-38-8, Ethylene trithiocarbonate			35444-20-3	
RM: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (uses)				
(water-thinned coatings with good corrosion, solvent, and alkali resistance for steel materials)				
RN 822-38-8 CAPLUS				
CN 1,3-dithiolane-2-thione (9CI) (CA INDEX NAME)				



RN 35444-20-3 CAPLUS
CN Carbonotrithiolic acid, monoethyl ester, potassium salt (9CI) (CA INDEX NAME)

Et-S-CS2H

● K

L7 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:41923 CAPLUS
DOCUMENT NUMBER: 139:8228
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith
INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKKXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003155451	A2	20030530	JP 2001-353750	20011119

PRIORITY APPL. INFO.:
OTHER SOURCE(S): MARPAT 139:8228
AB The coatings contain (a) 5-30t (as solid) water-thinned polymer dispersions, (b) 0.1-20t silica particles, and (c) 0.01-20t organic titanates. Thus, a water-thinned composition containing (a) a reaction product of

Kanabinol KD 5 (acrylic polymer), hydrogenated bisphenol A diglycidyl ether, and 3-glycidioxypropylmethyldimethoxysilane, (b) Snoutex N (silica), and (c) dipropoxybis(triethanolamino)titanium, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.

IT 822-38-8, Ethylene trithiocarbonate 35444-20-3
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(water-thinned coatings with good corrosion, solvent, and alkali resistance for steel materials)

RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



RN 35444-20-3 CAPLUS
CN Carbonotrithioic acid, monoethyl ester, potassium salt (9CI) (CA INDEX NAME)

Et-S-CS2H

● K

L7 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:250866 CAPLUS
DOCUMENT NUMBER: 138:402225
TITLE: Synthesis and Characterization of Poly(acrylic acid) Produced by RAFT Polymerization

AUTHOR(S): Loiseau, J.; Doeert, N.; Sun, J. M.; Egret, J. B.; Llauro, M. F.; Ladauere, C.; Claverie, J.
CORPORATE SOURCE: UMR 2142, CNRS/Bio Merieux Systems Macromolecules et Immunovirologie Humaine E.N.S.-L., Lyon, 69364, Fr.
SOURCE: Macromolecules (2003), 36(9), 3066-3077
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
JOURNAL

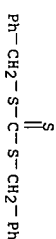
AB Poly(acrylic acid), PAA, was prepared by controlled radical polymerization with reversible addition-fragmentation chain transfer. Using trithiocarbonic acid (dibenzyl ester and trithiocarbonic acid bis(1-phenylethyl) ester as chain transfer agents (CTA), the polymerization is controlled for low ratios [AA]:[CTA]. At higher ratios, the polymerization is plagued by transfer to solvent. Transfer to polymer is also detected at high conversion, as shown by the presence of branches in NMR spectroscopy. In its neutralized form, PAA chains are not all terminated by a thiol end group, as shown by elemental anal., thiol titration, and MALDI TOF MS. Finally, dispersion of CaCO₃, kaolin, and TiO₂ using these PAA reveals that the dispersion characteristics are significantly improved using low-

polydispersity PAA.

IT 26504-29-0, Dibenzyl trithiocarbonate
RL: MOA (Modifier or additive use); USES (Uses)

(chain transfer agents; preparation of poly(acrylic acid) by reversible addition-fragmentation chain transfer polymerization in presence of)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 51

THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:242025 CAPLUS
DOCUMENT NUMBER: 138:238561
TITLE: Transition metal superoxides as catalysts for free radical polymerization
INVENTOR(S): Benicewicz, Brian C.; Kanagasabaythy, Subbaredy; Sudalai, Arumugam
PATENT ASSIGNEE(S): Rensselaer Polytechnic Institute, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXKCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003060577	A1	20030327	US 2002-102542	20020320

US 6765076

B2 20040720

US 2001-277175P P 20010320

REFERENCE COUNT: 34

THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

OTHER SOURCE(S): MARPAT 138:238561
Transition metal superoxides of formula $M(O_2)_n$, where M is a transition metal and n is equal to the valence of M, may be used as initiators for free radical polymerization, optionally, under conditions of living polymerization, with or without chain transfer agents. Polymers produced have a narrow mol. weight distribution and low polydispersity indexes when chain transfer agents and/or mol. weight controlling agents are used.

IT 26504-29-0

RL: NUU (Other use, unclassified); USES (Uses)

(Chain transfer agent; free radical polymerization in the presence of transition metal superoxide catalysts and chain transfer agents)

RN 26504-29-0 CAPLUS

CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

$$\text{Ph}-\text{CH}_2-\text{S}-\text{C}(\text{S})-\text{CH}_2-\text{Ph}$$

REFERENCE COUNT: 17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:134483 CAPLUS

DOCUMENT NUMBER: 138:356282

Block copolymers of acrylic acid and butyl

acrylate prepared by reversible addition-fragmentation chain transfer polymerization; synthesis, characterization, and use in emulsion polymerization
Gallard, Nicolas; Guyot, Alain; Clavier, Jerome
Laboratoire de Chimie et Procédés de Polymérisation, Centre National de la Recherche Scientifique, Ecole de Chimie Physique Electronique de Lyon, Centre National de la Recherche Scientifique, Villeurbanne, Fr.
Journal of Polymer Science, Part A: Polymer Chemistry (2003), 41(5), 684-698
CODEN: JPACJC; ISSN: 0887-624X

SOURCE:

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

AB Amphiphilic block copolymers of poly(acrylic acid-b-Bu acrylate) (I) were prepared by reversible addition-fragmentation chain transfer polymerization in a one-pot reaction. I were characterized by NMR, static and dynamic light scattering, tensiometry, and size exclusion chromatog. The aggregation characteristics of I corresponded to those theor. predicted for a star molecule. In a Bu acrylate-Me methacrylate emulsion copolymer, low amts. of I could stabilize the latexes with solid contents up to 50%.

IT 26504-29-0

RL: CAT (Catalyst use); USES (Uses)

(Chain transfer agent; in preparation of acrylic acid-Bu acrylate block copolymer by RAFT polymerization)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

$$\text{Ph}-\text{CH}_2-\text{S}-\text{C}(\text{S})-\text{CH}_2-\text{Ph}$$

L7 ANSWER 21 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:114352 CAPLUS
DOCUMENT NUMBER: 138:304570
TITLE: Living free radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization): approaches to star polymers

AUTHOR(S): Mayadunne, Roshan T. A.; Jeffery, Justine; Moad, Graeme; Rizzardo, Ezio

CORPORATE SOURCE: CSIRO Molecular Science, Clayton South, 3169, Australia

SOURCE: Macromolecules (2003), 36(5), 1505-1513
CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

AB The synthesis of multiaarm star polymers by radical polymerization with reversible addition-fragmentation chain transfer (RAFT) is described. When the precursor RAFT agents to star polymers are trithiocarbonate derived, fragmentation of the radical intermediate can lead to different products depending on the leaving abilities of the two groups attached to sulfur. To demonstrate this, two types of RAFT agents, ones that allow growth of arms away from the core and the other attached to the core during propagation were designed, and an example of each was synthesized. While both star RAFT agents gave excellent mol. weight control and low polydispersities (typically <1.2), the one that grows its arms away from the core offers polymers free from star-star coupled products. Thus, the direction of fragmentation should be considered when designing efficient star RAFT agents. The living nature of the arms of these polymers was demonstrated by extending the arms with a different monomer to afford a star block copolymer. The RAFT agents described are easily synthesized from com. available reagents by a simple exptl. procedure.

IT 42764-37-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(RAFT agent synthesis; living free radical polymerization with reversible addition-fragmentation chain transfer for synthesis of star polymers)

RN 42764-37-4 CAPLUS

CN Carbonotrithioic acid, monomethyl ester, sodium salt (9CI) (CA INDEX NAME)

$$\text{HS}-\text{C}(\text{S})-\text{S}-\text{CH}_3$$

● Na

REFERENCE COUNT: 40

THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 22 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:778028 CAPLUS
DOCUMENT NUMBER: 137:295192
TITLE: A method of treating the surface of a substrate polymer useful for graft

INVENTOR(S): **Polymerization**
Kambouris, Peter; Whitaker, Michael; Davis, Tom;
PATENT ASSIGNEE(S): Blakey, Idriss; Day, Gary
SOURCE: Polymerat Pty. Ltd., Australia
PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079305	A1	20021010	WO 2002-RU416	20020328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CI, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BU, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003088028	A1	20030508	US 2002-109777	20020328
US 6858309	B2	20050222		
EP 1383828	A1	20040128	EP 2002-112637	20020328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.: AU 2001-4048				
WO 2002-RU416	A	20010328		
W 20020328				

AB Radicals are generated on functional and/or backbone portions of polymers forming part of a solid phase surface and/or sub-surface to generate a substrate for initiation of polymerization. The polymerization is conducted in the presence of a control agent which induces a dynamic population of anchored growing (in a controlled manner) and dormant polymeric chains each comprising 22 monomers. Copolymers generated by this process include homopolymers and copolymers (comprising 22 monomers including terpolymers) such as inter alia block, graft, tapered, crosslinked and branched polymers. The substrate PMH 6100 was irradiated from Co-60 source, treated with TEMPO control agent, washed and dried, and graft polymerized with styrene at 80° for 16 h.

IT 26504-29-0, Dibenzyli triethiocarbonate
RL: CAT (Catalyst use); USES (Uses)
(Irradiation of a nonfunctional substrate polymer for graft agents)
polymerization with styrene in the presence of one or more control agents)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

Ph-CH₂-S-C-S-CH₂-Ph

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

I7 ANSWER 23 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:734987 CAPLUS
DOCUMENT NUMBER: 138:24997
TITLE: Living free radical polymerization under a constant source of gamma radiation - an example of

AUTHOR(S):
CORPORATE SOURCE:
SOURCE:
PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
AB The primary mechanism for living polymerization under a source of gamma radiation at low dose rates is shown to be reversible addition-fragmentation chain transfer. This was demonstrated by showing that the initial transfer step does, the success of the polymerization when an inappropriate leaving group is chosen for the RAFT agent, the polymerization is non-living. Under a reversible termination mechanism the "living"-ness should be independent of this initial transfer step.

IT 26504-29-0, Dibenzyli triethiocarbonate
RL: RCT (Reagent); RACT (Reactant or reagent)
(Chain transfer agent; addition-fragmentation chain transfer mechanism of living radical polymerization initiated by gamma radiation)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

Ph-CH₂-S-C-S-CH₂-Ph

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

I7 ANSWER 24 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:696025 CAPLUS
DOCUMENT NUMBER: 137:233074
TITLE: Method for controlled free radical polymerization of acrylic acid and salts thereof, resulting low-polydispersity polymers, and their uses
Suan, Jean-Marc; Egret, Jean-Bernard; Claverie, Jerome; Ladevriere, Catherine
Cortex S.A.S., Fr.
PCT Int. Appl., 107 pp.
CODEN: PIXXD2

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE:
DOCUMENT TYPE: Patent
FAMILY ACC. NUM. COUNT: 1
LANGUAGE: French
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002070571	A1	20020912	WO 2002-FR722	20020228
W: BR, CA, CO, CZ, ID, KR, MX, NO, PL, RU, SK, US				
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
FR 2821620	A1	20020906	FR 2001-2848	20010302
FR 2821620	B1	20030627		
CA 2438158	AA	20020912	CA 2002-2438158	20020228
EP 1377615	A1	20040107	EP 2002-713002	20020228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

BR 2002007799 A 20040323 BR 2002-7799 20020228
NO 2003003846 A 20030929 NO 2003-3846 20030829
US 2004097674 A1 20040520 US 2003-468398 20031231
PRIORITY APPLN. INFO.: FR 2001-2848 A 20010302
WO 2002-FR1722 W 20020228

AB Polymers of acrylic acid or its salts having

polydispersity 42 and gel content at conversion >90% are manufactured by free-radical polymerization in the presence of RXC(S)SR' (X = O or S, R = a group causing stabilization of RX function by CX, R' = a group such that the R'S bond is a CS bond) as chain-transfer agents. A typical chain-transfer agent was manufactured by reaction of 8.8 g K O-ethylthiocarbonate 20 min at 15° with di-Et

2-bromo-2-methylmalonate in water in the presence of Aliquat 336.

IT 26504-29-0

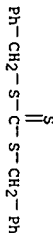
RI: NUU (Other use, unclassified); USES (uses)

(chain-transfer agents based on dithioesters for acrylic acid and its salts for manufacture of polymers with very low

polydispersity)

RN 26504-29-0 CAPLUS

CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 25 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:637892 CAPLUS

DOCUMENT NUMBER: 137:17126

TITLE: Water-thinned coating composition for treating metal surface

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi

PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan

SOURCE: PCT Int. Appl., 30 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002064856	A1	20020822	WO 2002-JP1214	20020214
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR	A2	20020828	JP 2001-37605	20010214
JP 2002241957	A2	20020828	JP 2001-37605	A 20010214

PRIORITY APPLN. INFO.:
AB Title coating composition with good anticorrosion, elec. conductivity, and adhesion

comprises (A) aqueous dispersing resins 5-30 (solids content), (B) silica fine particles (e.g., Showtex N 1-10), (C) thiocarbonyl compds. (e.g., thioourea) 0.02-5, and (D) phosphate ions 0.01-0.5 wt%, wherein A are obtained by neutralizing 230% of carboxyl groups with potassium

ions in an ethylene-unsatd. carboxylic acid copolymer containing 10-30 wt% of the unsatd. carboxylic acid (e.g., Primacor 55801)

and then reacting the water-dispersed ionomer resin with epoxy compds. (e.g., Denacol 313).

IT 822-38-8

RI: MOA (Modifier or additive use); USES (uses)

(as inhibitor in water-thinned coating composition for treating metal surface)

RN 822-38-8 CAPLUS

CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 26 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:204126 CAPLUS

DOCUMENT NUMBER: 136:402101

TITLE: Photo-initiated living free radical polymerization in the presence of dibenzyl trithiocarbonate

AUTHOR(S): Wang, Jian

CORPORATE SOURCE: State Key Lab of Fire Science, Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, 230026, Peop. Rep. China

SOURCE: Macromolecular Chemistry and Physics (2002), 203(3), 477-483

CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: English

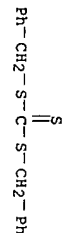
AB The polymers of styrene (St), Me acrylate (MA), and Bu acrylate (BA), carried out under UV irradiation at room temperature in the presence of dibenzyl trithiocarbonate (DBTC) were found to display living free-radical polymerization characteristics as evidenced by: narrow mol. weight distribution, linear increase of mol. weight with increasing conversion, well-controlled mol. weight, and first-order polymerization kinetics. The triblock copolymer, PMMA-*b*-St-PMMA, with narrow polydispersity and well-defined structure was successfully prepared using PMMA-*b*-St-PMMA as macro-photoinitiator under UV irradiation at room temperature. Based on GPC, NMR and FT-IR analyses, the structures of the polymers were obtained and the mechanism of the polymerization was proposed.

IT 26504-29-0P, Dibenzyl trithiocarbonate

RI: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (uses)

RN 26504-29-0 CAPLUS

CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 27 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:806178 CAPLUS

DOCUMENT NUMBER: 136:86101

TITLE: Controlled polymerization of acrylic acid under 60Co irradiation in the presence of dibenzyl trithiocarbonate

AUTHOR(S): Hong, Chun-Yan; You, Ye-Zi; Bai, Ru-Ke; Pan, Cai-Yuan; Borjhan, Gereltu

CORPORATE SOURCE:

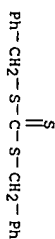
Department of Polymer Science and Engineering,
University of Science and Technology of China, Hefei,
230026, Peop. Rep. China
Journal of Polymer Science, Part A: Polymer Chemistry
(2001), 39(22), 3934-3939
CODEN: JPACCC; ISSN: 0887-624X
John Wiley & Sons, Inc.

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:

AB The polymerization of acrylic acid (AA) was performed under
60Co irradiation in the presence of dibenzyl trithiocarbonate at room
temperature,
and well-defined poly(acrylic acid) (PAA) with a low
polydispersity index was successfully prepared. The gel permeation
chromatog. and IR NMR data showed that this polymerization displays
living free-radical polymerization characteristics: a narrow mol. weight
distribution ($M_w/M_n = 1.07-1.22$), controlled mol. weight, and constant
chain-radical concentration during the polymerization. Using PAA-S-C(=S)-S-PAA
as an initiator, the extension reaction of PAA with fresh AA was carried
out under 60Co irradiation, and the results indicated that this extension
polymerization displayed controlled polymerization behavior.

IT 26504-29-0, Dibenzyl trithiocarbonate
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst; controlled gamma ray-induced
polymerization of acrylic acid in presence of dibenzyl
trithiocarbonate)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 28 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:578597 CAPLUS
DOCUMENT NUMBER: 135:124156
TITLE: Bactericide combinations in detergents
INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip
PATENT ASSIGNEE(S): Robert McBride Ltd., UK
SOURCE: Brit. UK Pat. Appl., 53 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001
PRIORITY APPL. INFO.:			GB 1999-23253	19991001
AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduror 50, (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savinase 0.2, and bactericide pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2. 534-18-9 Rt: BU (Biological use, unclassified); NDU (Other use, unclassified); BIOL (Biological study); USES (Uses)				

(bactericide combinations in detergents)
RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



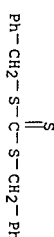
● 2 Na

L7 ANSWER 29 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:556450 CAPLUS
DOCUMENT NUMBER: 135:273266
TITLE: A novel approach to triblock copolymers: 60Co
gamma-irradiation-induced copolymerization in the
presence of a trithiocarbonate macroinitiator

AUTHOR(S):
CORPORATE SOURCE:

SOURCE:

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
AB Triblock copolymers were prepared under 60Co gamma-irradiation in the
presence of a trithiocarbonate macroinitiator. The triblock copolymers,
PSt-PMA-PSt and PMA-PSt-PMA have well-defined structures, controlled mol.
weight and narrow mol. weight distribution. The mechanism of block copolym.
is discussed.
IT 26504-29-00P, Dibenzyl trithiocarbonate, reaction products with
poly(4-vinylpyridine) or polystyrene
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(Me acrylate-styrene triblock copolymer preparation by gamma
ray-induced polymerization in presence of trithiocarbonate
macroinitiator)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

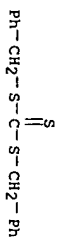


REFERENCE COUNT:

51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 30 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:463752 CAPLUS
DOCUMENT NUMBER: 135:195878
TITLE: Controlled Radical Polymerization of
Acrylic Acid in Protic Media
AUTHOR(S): Ladvare, Catherine; Doerr, Nicole; Claverie, Jerome
CORPORATE SOURCE: LCP CPE/CNRS 43, Villaurbane, 69616, Fr.
SOURCE: Macromolecules (2001), 34(16), 5370-5372

CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Various dithio esters were prepared and screened for their suitability as chain transfer agents in the title polymerization
IT 26504-29-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(chain transfer agent; controlled radical polymerization of acrylic acid in protic media using dithio compds. as chain transfer agents)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 31 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:101125 CAPLUS
DOCUMENT NUMBER: 134:157573
TITLE: Dithiolthione compounds for the treatment of neurological disorders and for memory enhancement

INVENTOR(S): Prendergast, Patrick T.; Armstrong, Paul
PATENT ASSIGNEE(S): Ire.
SOURCE: RCT Int. Appl., 109 pp.
CODEN: PIXXDZ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
MO 2001009118	A2	20010208	MO 2000-1B1146	20000728
MO 2001009118	A3	20011122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, EG, ES, FI, FR, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000064625	A5	20010219	AU 2000-64625	20000728
US 2004053389	A1	20040318	US 2003-612476	20030702
PRIORITY APPLN. INFO:			US 1999-14594P	P 19990729
			IE 2000-302	A 20000413
			IE 2000-304	A 20000413
			US 2000-198338P	P 20000418
			US 2000-627641	BI 20000728
			MO 2000-1B1146	W 20000728

OTHER SOURCE(S): MARPAT 134:157573
AB The invention provides methods to treat neuro. disorders such as Alzheimer's disease, or to slow the progression of such diseases, or to treat and/or prevent other disorders as disclosed in the specification, by administering to patients, or delivering to the tissues of such patients, olipipraz or related 1,2-dithiole-3-thiones. The effects of olipipraz on Aβ1-42 neurotoxicity, oxidative stress, removal of iron from tissues, localization of 8-hydroxyguanosine (predominantly derived from -OH

attack of guanidine), mitochondrial damage as well as its antiproteoal activity were examined. Synthesis of olipipraz is presented.

IT 930-35-8, 1,3-dithiole-2-thione
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOD (Biological study); USES (uses)
(dithiolthione compds. for treatment of neuro. disorders and for memory enhancement)
RN 930-35-8 CAPLUS
CN 1,3-dithiole-2-thione (9CI) (CA INDEX NAME)



L7 ANSWER 32 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:613535 CAPLUS
DOCUMENT NUMBER: 133:335522
TITLE: Living free radical polymerization with transfer reversible addition - fragmentation chain transfer (the life of RAFT)

AUTHOR(S): Moad, Graeme; Chiefari, John; Chong, Y. K.; Kratina, Julia; Mayadunne, Roshan T. A.; Postma, Almar; Rizzardo, Ezio; Thang, San H.

CORPORATE SOURCE: CSIRO Molecular Science, Clayton South, 3169, Australia

SOURCE: Polymer International (2000), 49(9), 993-1001

CODEN: PLITER; ISSN: 0959-8103

John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Free radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization) is discussed with a view to answering the following questions: (a) How living is RAFT polymerization. (b) What controls the activity of thiocarbonylthio compds. in RAFT polymerization. (c) How do rates of polymerization differ from those of conventional radical polymerization. (d) Can RAFT agents be used in certain RAFT polymerizations. Retardation, observed when high concns. of emulsion RAFT agents are used and in the early stages of emulsion polymerization, and how to overcome it by appropriate choice of reaction conditions, are considered in detail. Examples of the use of thiocarbonylthio RAFT agents in emulsion and miniemulsion polym.

are provided.

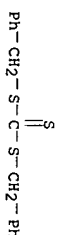
IT 26504-29-0

RL: NUU (Other use, unclassified); USES (uses)

(chain transfer agent; living free radical polymerization with reversible addition-fragmentation chain transfer)

RN 26504-29-0 CAPLUS

CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT
L7 ANSWER 33 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:13136 CAPLUS
DOCUMENT NUMBER: 132:180905

TITLE: living polymers by the use of trithiocarbonates as reversible addition-fragmentation chain transfer (RAFT) agents. ABA triblock copolymers by radical polymerization in two steps

AUTHOR(S): Mayadunne, Roshan T. A.; Ritzardo, Ezio; Chieffari, John; Kristina, Julia; Moad, Graeme; Postma, Almar; Thang, San H.

CORPORATE SOURCE: CSIRO Molecular Science, Clayton South, 3169, Australia

SOURCE: Macromolecules (2000), 33(2), 243-245
CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

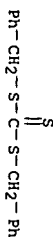
LANGUAGE: English

AB Trithiocarbonates RS-CS-SR', where R and R' are homolytic leaving groups, were used as effective reversible addition-fragmentation chain transfer agents. Styrene, Me acrylate, Bu acrylate and Me methacrylate were polymerized in the presence of various trithiocarbonate comods. (R/R': Me/C(Me)2CN, Me/CH(IPh)COOH, benzyl/benzyl, and α -methylbenzyl/ α -methylbenzyl) and mol. weight and conversion data were determined. Homopolymers and block copolymers of controlled mol. weight and narrow polydispersity were prepared. Important ABA triblock copolymers of predetd. mol. weight are accessible in 2 steps.

IT 26504-29-0
RL: MOA (Modifier or additive use); USES (Uses)
(trithiocarbonates as reversible addition-fragmentation chain transfer agent for preparation of triblock copolymers by radical polymerization)

RN 26504-29-0 CAPUS

CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I7 ANSWER 34 OF 49 CAPUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:388466 CAPUS
DOCUMENT NUMBER: 129:71602
TITLE: Wastewater treatment process and apparatus for high flow impurity removal
INVENTOR(S): Allen, Stephen D.; Lyman, Leonard R.
PATENT ASSIGNEE(S): Environmental Chemistry, Inc., USA
SOURCE: PCT Int. Appl., 27 pp.
DOCUMENT TYPE: CODEN: PIXXD2
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: English
PATENT INFORMATION: 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9823538	A1	19980604	WO 1997-US21375	19971126
W. AL, AM, AT, AU, AZ, BA, BG, BR, BY, CA, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NA, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TW, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW: GH, KE, LE, TM, SD, SG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				

US 5871648
US 5965027
AU 9853603
PRIORITY APPL. INFO.:

US	1996-756681	19961126
US 5965027	US 1997-965574	19971108
AU 9853603	AU 1998-53603	19971126
	US 1996-756681	19961126
	US 1997-965574	19971106
	US 1997-US21375	19971126

AB A process and system for removing heavy metals, fluoride, silica and other contaminants from large vols. of wastewater is described. In the process, a wastewater stream containing the contaminant is treated with a chemical coagulant to create a particle having a diameter of 25 μ m. The treated wastewater is passed through a microfiltration membrane (average pore size 0.3-5 μ m) to sep. metal contaminants. The treated wastewater flow rates through the microfiltration membranes are 700-1500 gal/ft²/day (GFD) for removing metal contaminants and 140-600 GFD for removing silica contaminants, resp. The solids are removed from the membrane surface by periodically back-flushing the microfiltration membranes and draining the filtration vessel within which the membranes are located. The dislodged solid material within the filtration vessel is flushed into a holding tank for further processing of the solids.

IT 534-18-9 Sodium trithiocarbonate
RL: NUU (Other use, unclassified); USES (Uses)
(wastewater treatment process and apparatus for high flow impurity removal)

RN 534-18-9 CAPUS

CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I7 ANSWER 35 OF 49 CAPUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:516690 CAPUS
DOCUMENT NUMBER: 122:291637
TITLE: Synthesis and reaction of polymers bearing 5-membered cyclic dithiocarbonate group
AUTHOR(S): Kihara, Nobuhito; Tochigi, Hidefumi; Endo, Takeshi
CORPORATE SOURCE: Res. Lab. Resources Utilization, Tokyo Inst. Technology, Yokohama, 226, Japan
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1995), 33(7), 1005-10
DOCUMENT TYPE: CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 5-(Methacryloyloxy)methyl-1,3-oxathiolane-2-thione (II) was synthesized from glycidyl methacrylate (GMA) and carbon disulfide in the presence of lithium bromide in 93% yield. The radical polymerization of I in DMSO initiated by AIBN at 60°C afforded corresponding polymethacrylate (II) quant. Copolymer of I with MMA was also carried out. 5-Phenoxyethyl-1,3-oxathiolane-2-thione, model dithiocarbonate, reacts with benzylamine at room temperature to afford O-(1-mercapto-3-phenoxy-2-propyl)-N-benzyl-thiocarbamate and 1,1'-dithiobis[3-phenoxy-2-(benzylaminothiocarbonyloxy)-propane] in 89% and 7% yield, resp. Polymer II reacted with butylamine or diisopropylamine to afford a corresponding polymethacrylate bearing thiol group, which immediately turned to insol. gel by facile auto-oxidation of the thiol group.

depressants for sulfide minerals in froth flotation of complex ores, and are suitable for separation of pyrite and pyrrhotite as Fe-rich gangue minerals. The polymer structure is based on I having R, R₁, and/or R₂ as H or Cl-4 alkyl groups; R₃ as H, Cl-4 alkyl, or aryl; R₄ and R₅ as H, Cl-4 hydrocarbon, and/or aryl; Z is the polymerizable residue of a monomer; and x = 20-99.0, y = 1.0-30.0, and z = 0-50.0 mol.-%. The polymer mol. weight is 103-106. The copolymer is optionally used with a surface-modifying agent and does not require high pH values. The monomers in Z are selected from acrylonitrile, styrene, or a cationic complex (especially diallyldimethylammonium chloride); acrylic, methacrylic, or maleic acids; or alkali metal salts or alkyl esters of the acids. Thus, a solution of acrylamide, 9.0 and N-allylthiourea 1.0 dissolved in water 90 parts by weight was stirred for 30 min, heated to 50° under N, treated with aqueous (NH₄)₂S₂O₈ as the polymerization initiator, and reacted for 3 h. The resulting copolymer containing 6 mol-% of allylthiourea showed for 5 h. The applying copolymer having mol. weight .apprx.6000 was tested at 0.80 lb/ton in froth flotation for cleaning of chalcopyritic ore concentrate containing 28.0 Cu and 3.1% S.

Mo. The ore slurry included NaHS (a standard depressant) at 1.3 lb/ton solids, and was conditioned in 5 min. The flotation recovery of Mo was 82.6% at the concentrate grade of 21.1%, compared with 78.8-95.4 at 14.2-24.3% using only the standard NaHS at 3.7-6.8 lb/ton that required 15-min conditioning and was sensitive to oxidation by air in .apprx.2 min during the flotation.

IT 90980-77-1 534-18-9, Sodium trithiocarbonate
RL: PROC (Process)
RN 90980-77-1 CAPLUS
CN Propanoic acid, 3-[[dithiocarboxy]thio] - (9CI) (CA INDEX NAME)

HO₂C-CH₂-CH₂-S-CS₂H

RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L7 ANSWER 38 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:200224 CAPLUS
DOCUMENT NUMBER: 104:200224
TITLE: Selenium and sulfur compounds for treating drug

INVENTOR(S):
PATENT ASSIGNEE(S): Avram, Elena, USA

SOURCE: U.S., 4 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4565690	A	19860121	US 1985-722493	19850412
WO 8605978	A1	19861023	WO 1985-US699	19850418
EP 217793	A1	19870415	EP 1985-902309	19850418
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
CA 1282337	A1	19910402	CA 1986-506562	19860414
PRIORITY APPL. INFO.: US 1985-722493	A	19850412		
AB Drug addiction in humans, particularly the symptoms of withdrawal, is treated by administration of a lipid-soluble compound containing bivalent neg.				
Se or S to counteract the effects of abnormal fatty acids produced in addicted individuals. Examples of such compds. are organic selenides, Se-containing fatty acids, selenized or sulfurized oils, thiosulfates, organic lipid sulfides, disulfides, or mercaptans, thioglycerols, and thioglycols.				
IT 822-38-8				
RL: BIOL (Biological study)				
(In drug addiction treatment)				
RN 822-38-8 CAPLUS				
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)				

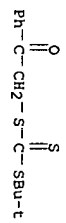


L7 ANSWER 39 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1983:35521 CAPLUS
DOCUMENT NUMBER: 98:35521
TITLE: Epoxy resin thermosetting compositions
PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKKXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
JP 57102922 A2 19820626 JP 1980-178451 19801217
JP 63012094 B4 19880317 JP 1980-178451 19801217
PRIORITY APPL. INFO.:
AB Thermosetting compns. comprising cationically polymerizable organic substances, nonnucleophilic Lewis acids (or onium salts of strong acids), and tertiary alc. carboxylates, organic peroxides, thioacetyl derivs., organic

polyulfides, metal acetylacetonates, aromatic-substituted vicinal diols, Pb peroxides, quinone derivs., and/or C6H5IO are polymerizable in a short time to give cured products with good properties. Thus, a mixture of ERL-422 [25085-98-7] 100, S-(ethoxycarbonylmethyl)tetramethylenesulfonium hexafluoroarsenate [84133-20-8] 3, and 2,3-dichloro-5,6-dicyanoquinone (I) [84-58-2] 3 parts gelled in 5 s at 150°, compared with 6 min when I was omitted.
IT 71988-71-1
RL: CAT (Catalyst use); USES (Uses)

(crosslinking catalysts, with nonnucleophilic Lewis acids, for epoxy resins)
RN 71988-71-1 CAPLUS
CN Carbonotrithioic acid, 1,1-dimethylethyl 2-oxo-2-phenylethyl ester (9CI) (CA INDEX NAME)

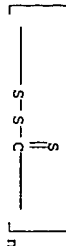


L7 ANSWER 40 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:565831 CAPLUS
DOCUMENT NUMBER: 77:165831
TITLE: Delayed-action vulcanization accelerator system
INVENTOR(S): Strail, Raymond C.; Taylor, Ray D.
PATENT ASSIGNEE(S): Goodrich, B. F., Co.
SOURCE: U.S., 7 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3692719	A	19720919	US 1970-96926	19701210
CA 946092	A1	19740423	CA 1971-128025	19711118
JP 51028110	B4	19760817	JP 1971-100102	19711210
PRIORITY APPL. INFO.: US 1970-96926	A	19701210		
AB A blocked isocyanate-polythiocarbonate mixture was a delayed				

action accelerator for **unsatd.** rubbers. Thus, an SBR-butadiene rubber vulcanization mixture containing **polythiobarbionate** [32198-31-5] and the reaction product of toluene diisocyanate [26471-62-3] and dimethylamine [124-40-3], milled at 150 deg. F for 5 min and then vulcanized at 360 deg. F, had a cure time of 1.60 and a scorch time of 0.62 compared with 2.75 and 1.30 for the mixture vulcanized in the absence of the blocked isocyanate and **polythiobarbionate**.

IT 32198-31-5
RL: USES (uses)
LANGUANGE: (vulcanization accelerator systems containing)
RN 32198-31-5 CAPLUS
CN Poly(dithiocarbonothioyl) (9CI) (CA INDEX NAME)



[Handwritten signature]

L7 ANSWER 41 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1971:13972 CAPLUS
DOCUMENT NUMBER: 74:13972
TITLE: Effect of heat aging resistance on the chemical structure of **polyepichlorohydrin** rubber
AUTHOR(S): Mori, Kunio; Nakamura, Yoshiro
CORPORATE SOURCE: Fac. Eng., Iwate Univ., Morioka, Japan
Kogyo Kagaku Zasshi (1970), 73(7), 1515-19
SOURCE: CODEN: KKGZAT; ISSN: 0368-5462

DOCUMENT TYPE: Japanese
LANGUANGE: Japanese
GI For diagram(s), see printed CA Issue.
AB **Polyepichlorohydrin** rubber was vulcanized for intensifying the heat-aging resistance by new vulcanizing agents, i.e., Na₂S₂O₈, H₂NCH₂CH₂NH₂·H₂S₃·MgO·S, Na₂CS₃·S, and KSCN-Mecon-Me₂. The relation of crosslinking structure to heat-aging resistance of the vulcanized rubbers was studied. The heat-aging resistance of the vulcanized rubbers was compared with that of a vulcanizate containing H₂NCH₂CH₂CH₂NH₂·MgO (I). The above-mentioned vulcanizing agents produced the crosslinking structures -S₂-3-, -NHCH₂CH₂NH-, -SC(S)S-, and II, resp. The rubbers produced were phys. stronger than I, which gave a rigid vulcanizate with low elongation and superior heat-aging resistance.
IT 534-18-9
RL: USES (uses)
LANGUANGE: (chloropropene rubber crosslinked by, heat-aging properties of)
RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na
L7 ANSWER 42 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:43698 CAPLUS
DOCUMENT NUMBER: 69:36968
TITLE: Electron-microscopic investigations on rayon fiber surfaces. I. Preparation technique for surface

AUTHOR(S): replicas of wet fibers
CORPORATE SOURCE: Groebe, Anneliese; Maron, Reinhard; Rose, Klaus Peter
Deut. Akad. Wiss. Berlin, Teltow-Seehof, Fed. Rep. Ger.
SOURCE: Forschung und Textiltechnik (1968), 19(6), 253-8
CODEN: FSTYXV; ISSN: 0014-8628
LANGUANGE: German
DOCUMENT TYPE: Journal

AB The surface modifications on filaments due to spinning processes were investigated by electron microscopy. Usual techniques of sample preparation were **unsatisfactory**, since the vacuum required for a C/Pt deposition evaporated the water from the swollen fiber and destroyed the original structure. The problem was solved by exchanging the water of swelling with glycerol (I). Treating the sample with I stopped the effects of the spinning bath. Onto the I-swollen sample was deposited C/Pt and this coated with **polystyrene**. The fibers were then dissolved with 72% H₂SO₄ and the protective film dissolved with CHCl₃. Results supported a coating of ZnS and ZnCS₃, as postulated by Klare (1960) and Goetze (1960), which was deposited during the filament formation and again destroyed by the spinning bath. 23 references.

IT 4052-53-3
RL: USES (uses)
LANGUANGE: (coatings from zinc sulfide and, on rayon for electron microscopy)
RN 4052-53-3 CAPLUS
CN Zinc, [carbonotrithioato(2-)-S,S']- (9CI) (CA INDEX NAME)



L7 ANSWER 43 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:69892 CAPLUS
DOCUMENT NUMBER: 68:69892
TITLE: Low-molecular-weight mastics
INVENTOR(S): Baldwin, Francis P.; Pavlick, Michael A.; Mueckler, Leon S., Jr.; Auda, Richard S.; Bamister, Eric
PATEENT ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: Fr., 10 pp.
CODEN: FRXXAK
DOCUMENT TYPE: Patent
LANGUANGE: French
FAMILY ACC. NUM. COUNT: 1
PATEENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1488452	FR	19670713		
DE 1595573	DE			
GB 1128105	GB			
PRIORITY APPL. INFO.:	US			

AB Easily manipulatable mastics are prepared by halogenating low-mol.-weight, halogenated **polymer** in the presence of various stabilizing, vulcanizing, and accelerating agents. Thus, a copolymer containing 94.6 mole % isobutylene and 5.1 mole % isoprene was prepared by **polymerizing** the monomers 20 min. at -56.5° in the presence of EtAlCl₂ in hexane. The **polymer** solution was chlorinated at ambient temperature to give a **polymer** having number-average mol. weight 9.30 and containing 6.13 mole % Cl. The chlorinated **polymer** 100, carbon black 50, SnCl₂·2H₂O 2.5,

and 1,4-butanedithiol 2 parts was vulcanized for 30 min. at 90° and aged for 4 days to give a mastic having 1001 modulus 26 kg./cm.2, tensile strength 52.3 kg./cm.2, and 2408 elongation. The mastic could also contain brominated polymer, clay, diluting oil, BuSnCl3 or Bu2SnCl2, salicylic acid, and (or) oxydibenzyle mercaptan, glycol dimercaptoacetate, Zn trimethylene dimercaptilide, Bu2SnS, ethylene trithiocarbonate, tetraethylenepentamine, or N,N'-dibutylthiourea.

IT 822-38-8
 RL: USES (Uses)
 (as crosslinking agent for chlorinated isoprene-2-methylpropene polymers)

RN 822-38-8 CAPLUS
 CN 1,3-dithiolane-2-thione (9CI) (CA INDEX NAME)



L7 ANSWER 44 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
 ACCESSION NUMBER: 1967:421475 CAPLUS
 DOCUMENT NUMBER: 67:21475
 TITLE:

Organic sulfur compounds (heterocycles and primers).

AUTHOR(S): IXIII. Chemistry of thio-cyclohexanones
 Morgenstern, Johannes; Mayer, Roland
 Tech. Univ., Dresden, Germany
 SOURCE: Journal fuer Praktische Chemie (Leipzig) (1966), 34(1-4), 116-38
 CODEN: JPCEAO; ISSN: 0021-8383

DOCUMENT TYPE: German
 Journal
 OTHER SOURCE(S): CASREACT 67:21475

GI For diagram(s), see printed CA issue.
 AB CA 66: 37084u, 94784w. Thio-cyclohexanone (I) exists in tautomeric forms, the red oxo form (Ia), b1.5-55-63°, n20D 1.5351, and the colorless enol form (Ib), b27-8 70-1°, n20D 1.5290. On standing Ia lost its red color and formed a dimer and a polymer. The

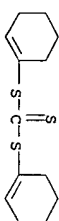
trimer, m. 102-3°, was formed by acid catalysts or by strongly polar solvents, but not by self-polymerization. Ib did not polymerize as readily. The K salt (II) of Ib formed colorless leaflets, hydrolyzed readily and when heated with water formed Ia. Hg salts were relatively unstable. II reacted with alkyl halides or with diazoalkanes in absolute ether to form thio ethers, which are stable to bases, but which hydrolyze with heating to Ia and mercaptans. The following sulfides (IIa) were prepared (R and b.p./mm. given): Et, 86-7°/17-18 (n20D 1.5171); iso-Pr, 90-1°/12-13 (n20D 1.5074); benzyl, 123-6°/0.9-1° (m. 26-9°); Ph3C, - (m. 106-8°); CH3CO2Et, 102-3°/0.8-1.0 (n20D 1.5083); CH3CH2CO2Et, 148-50°/1.8-2.0 (n20D 1.5088); CH3CO2Et, 94.5-5°/0.8-0.9 (n20D 1.5013); CH3CH2OH, 103-5°/1.2-1.3 (n20D 1.5417); CH2CH2CN, 120-2°/1.1-1.3 (n20D 1.5327); CH2CH2Br, 90-1°/0.8-1.0 (n20D 1.5640). Reaction of II with 1,2-dibromoethane produced Ia [R = β-(1-cyclohexen-1-ylthio)ethyl], m. 16-20°. Reaction of II with 2,4-dinitrochlorobenzene produced IIa [R = 2,4-(O2N)2C6H3], m. 160-1°. Ac2O, ClCO2Et, BzCl, diphenylacetyl chloride, and ClCH2COCl (III) reacted with II to form thio esters (IIIs) of Ib resp., as follows (R and b.p./mm. given): Ac, 60.5-63°/0.4-0.6 (n20D 1.5230); EtO2C, 75-6°/0.4-0.5 (n20D 1.5050); Br, 140-3°/0.3-0.7 (n20D 1.5972); Ph2CHCO-, (m. 49-51°); ClCH2CO, 92-5°/0.7-0.8 (n20D 1.5453). The thio ester of III reacted with more II to produce IIa [R = (1-cyclohexen-1-ylthio)acetyl], b0.9-1.0 175-6°. Thiophosgene reacted with II to produce 47% di-1-cyclohexen-1-yl trithiocarbonate, m. 58-9°. Addition of Ib to epoxides proceeded readily. Addition

to cyclohexene oxide produced IIa [R = 2-hydroxycyclohexyl], b1.2-1.4 134-5°, n20D 1.5461. Addition of ethylene oxide (IV) formed IIa [R = CH2CH2OH], b1.4-1.5 111-13°, n20D 1.5400, which by heating 48 hrs. with concentrated H2SO4 produced 2,2-pentamethylene-1,3-oxathiolane, b1.5-1.7 66-7°, n20D 1.5168. Excess IV produced IIa [R = CH2CH2OCH2CH2OH], b1.2-1.4 139-43°. Reaction of I with cyclohexene sulfide yielded IIa [R = 2-mercaptopcyclohexyl] (V), b0.42 135-8°. The derivative of which with 2,4-dinitrochlorobenzene m. 105-7°. V after keeping 24 hrs. changed to 2,2-pentamethylene-trans-4,5-tetramethylene-1,3-dithiolane, m. 78-80°. Ethylenimine reacted smoothly with I to form 2,2-pentamethylene-1,3-thiazolidine, b2.0-2.2 89-90°, n20D 1.5410, which was benzoylated to give 3-benzoyl-2,2-pentamethylene-1,3-thiazolidine, m. 136-8.5°. Warming II with CS2 in absolute benzene and subsequently heating with benzyl bromide produced (1-cyclohexen-1-yl)benzyl trithiocarbonate, m. 32-3.5°. Reaction of I with phenyl isocyanate produced S-1-cyclohexen-1-yl phenylthiocarbamate, m. 163-4°. Reaction of I with diphenylketene produced S-1-cyclohexen-1-yl diphenylthioacetate m. 49-52°. In alkaline solution I yielded no benzal derivs., but in benzenesulfonic acid and benzene with BzH it produced first 1,3-dibenzal-2-cyclohexanone, m. 117-19°. Upon removal of this and concentrating, benzaldehyde di-1-cyclohexen-1-yl mercaptal, m. 128-30°, precipitated. Upon using nitrobenzaldehyde the corresponding nitro compound, m. 152-3°, was produced. By heating I with tetramethylthiuram disulfide, dimethylammonium dimethylthiocarbamate was produced, which was filtered off and the filtrate concentrated to yield 30% 4,5-tetramethylene-1,3-dithiole-2-thione, m. 81-3°. Reaction of I with aniline in dioxane gave cyclohexanone phenylamine, b1.4-1.6 105-8°, n20D 1.5585, and with phenylhydrazine gave cyclohexanone phenylhydrazine, m. 73-6°. Similarly, the oxime and semicarbazone of cyclohexanone were prepared. Piperidine with I produced piperidino-cyclohexene, b3-5 93.5-95°, n20D 1.5146. I was hydrolyzed in hot water to cyclohexanone. Alcohols of I with absolute EtOH 82-4°. I and H2S gave 1,1-dimercaptocyclohexane, b2.3 62-3°. n20D 1.5449. Mesh gave 1-mercaptop-1-(methylthio) cyclohexane (VI), b1.1-1.2 65.5-67°, n20D 1.5451, and similarly 1-mercaptop-1-(ethylthio) cyclohexane, b0.2-0.4 67-9°. (CH2SH)2 gave deep red 1-mercaptop-1-(β-mercaptopethylthio) cyclohexane (VII), b1.3-1.6 68-90°. Treatment of VI with diazomethane produced 1,1-bis(methylthio) cyclohexane (VIII), b2.3-2.5 96-8°, n20D 1.5388. Similarly, treatment of VII with diazomethane followed by permanganate oxidation to yield the trisulfone, 2,4,7-trithia-3,3-pentamethyleneoctane 2,2,4,4,7,7-hexoxide, m. 117-20°. A mixture of VI and benzylmercaptan in benzene with p-toluenesulfonic acid yielded 1-methylsulfonyl-1-benzylsulfonyl-cyclohexane, m. 137-40°. Heating I with malonitrile produced cyclohexylidenealonitrile. Reduction of I with Al amalgam in moist ether yielded cyclohexylmercaptan, m. 147-9°. Reduction of I with absolute EtOH, sulfur, and Et3N produced 3,3,5,5-tetramethylene-1,2,4-trithiolane, m. 49-50°. Reduction of II with N-bromosuccinimide in absolute benzene yielded 1,2,3,4,5,6,7,8-octahydrodibenzothioephene b1.1-1.5 122-5°, which crystallized to a colorless solid, m. 29-31°.

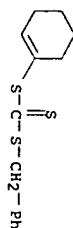
IT 15786-88-6P 15786-95-5P

RL: SPN (Synthetic Preparation); PREP (Preparation)

RN 15786-88-6 CAPLUS
 CN Carbonic acid, trithio-, di-1-cyclohexen-1-yl ester (8CI) (CA INDEX NAME)



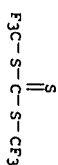
RN 15786-95-5 CAPLUS
CN Carbonic acid, trithio-, benzyl 1-cyclohexen-1-yl ester (8CI) (CA INDEX NAME)



L7 ANSWER 45 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:19057 CAPLUS
DOCUMENT NUMBER: 64:19057
ORIGINAL REFERENCE NO.: 64:3446e-f
TITLE: Tetrafluorothiirane
INVENTOR(S): Braesen, W. R.; Cripps, H. N.; Bottomley, C. G.; Farlow, M. W.; Krespan, C. G.
PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co., Inc., Wilmington, DE
SOURCE: Journal of Organic Chemistry (1965), 30(12), 4188-93
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 64:19057
AB Pure tetrafluorothiirane has good stability to heat and ultraviolet light. Free-radical attack occurs at S with ring opening. The radical intermediate so formed can participate efficiently in chain reactions by adding to an olefin, attacking another molecule of tetrafluorothiirane, or abstracting H from a substrate. Ring opening is also induced by nucleophiles, but by attack on C rather than S. This can result in cycloaddn. reactions with unsatd. mols. such as ketones or formation of thioacetic acid deriva. with stronger bases. Aluminum chloride, a powerful electrophile, causes unusual isomerization and condensation reactions.
IT 461-08-5, Carbonic acid, trithio-, bis(trifluoromethyl) ester (preparation of)
RN 461-08-5 CAPLUS
CN Carbonotrithioic acid, bis(trifluoromethyl) ester (9CI) (CA INDEX NAME)

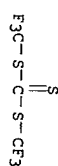


L7 ANSWER 46 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:19056 CAPLUS
DOCUMENT NUMBER: 64:19056
ORIGINAL REFERENCE NO.: 64:3446d-e
TITLE: Reduction of unsaturated α -oxides by trialkylstannanes

AUTHOR(S): Bryskovskaya, A. V.; Al'Ditskaya, V. M.; Petrov, A. A.
CORPORATE SOURCE: Leningrad Technol. Inst., Leningrad
SOURCE: Zhurnal Obshchei Khimii (1965), 1(10), 1898-9
CODEN: ZOKHAA; ISSN: 0044-460X

DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 64:19056
AB 1,2-Dipropyl-3-butene and Et3SnH gave 50% mixed Mech:CHCH2OH and CH2:CHCH2CH2OH, b. 118-20°, d20 0.8572, n20D 1.4268, along with (Et3Sn)2. Isoprene oxide similarly gave 2-methyl-2-buten-1-ol and 2-methyl-3-buten-1-ol, b. 132-6°, 0.8630, 1.4368.
IT 461-08-5, Methanethiol, trithio-, trithiocarbonate

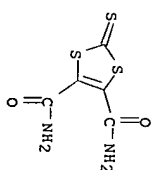
(preparation of)
RN 461-08-5 CAPLUS
CN Carbonotrithioic acid, bis(trifluoromethyl) ester (9CI) (CA INDEX NAME)



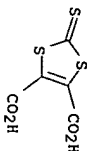
L7 ANSWER 47 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:424650 CAPLUS
DOCUMENT NUMBER: 63:24650
ORIGINAL REFERENCE NO.: 63:4431c-d
TITLE: 2-(p-Dimethylaminophenyl)-1,3-dithiolium iodide
INVENTOR(S): Kingsberg, Erwin
PATENT ASSIGNEE(S): American Cyanamid Co.
SOURCE: 2 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3187009	---	19650601	US	19630305

GI For diagram(s), see printed CA issue.
AB The title compound (I) gave bright pink dyes on polyacrylonitrile fiber. A solution of 0.130 mole of 4,5-dicyano-1,3-dithiole-2-thione in 160 ml. concentrated HCl was stirred for 5 days to give bright yellow 1,3-dithiole-2-thione-4,5-dicarboxamide (II), recrystd. from PhMe. A solution of 0.12 mole of II in 200 ml. concentrated HCl and 155 ml. H2O was refluxed for 4 hrs. to give orange 1,3-dithiole-2-thione-4,5-dicarboxylic acid (III), m. 150-2° (PhMe). To a solution of 11.1 g. III in 85 ml. MeNO2 was added 70 ml. MeI, and the mixture was refluxed for 8 hrs. to give 1,3-dithiole-2-thione-MeI (IV). A solution of 0.55 g. IV, 0.55 ml. PhMe2, and 10 ml. HOAc was heated on the steam bath 1 hr., cooled, and filtered to give 0.37 g. I, violet needles, m. 220-1° (HOAc).
IT 1008-61-3, Carbonic acid, trithio-, cyclic ester, with cyclic trithiocarbonate
RN 1008-61-3 CAPLUS
CN 1,3-Dithiole-4,5-dicarboxamide, 2-thioxo- (9CI) (CA INDEX NAME)



RN 1008-62-4 CAPLUS
CN 1,3-Dithiole-4,5-dicarboxylic acid, 2-thioxo- (9CI) (CA INDEX NAME)



L7 ANSWER 48 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
 ACCESSION NUMBER: 1962:60494 CAPLUS
 DOCUMENT NUMBER: 56:60494
 ORIGINAL REFERENCE NO.: 56:11527C-1,11528C-d
 TITLE: Aminolysis and esterification of unsymmetrical epoxides

AUTHOR(S): Colclough, T.; Cunneen, J. I.; Moor, C. G.
 CORPORATE SOURCE: Nat. Rubber Producers Research Assoc., Melwyn Garden City, UK
 SOURCE: Tetrahedron (1961), 15, 187-92
 CODEN: TETRAAB; ISSN: 0040-4020

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB The reactions of 1,2-epoxy-propane (I) and 2-methyl-2,3-epoxypentane (II) with various primary and secondary amines and with hexahydrophthalic anhydride (III) in the presence of hydroxylic catalysts were studied. Interaction of Me2C:CHET and BzO2H in CH2Cl2 at 0-5° and fractionation through a 40-plate column yielded 80% II, b768 97.2-7.8°, n20D 1.3954. LALH4 reduction of ClCH2CO2Me gave ClCH2CH2OH (IV), b111 76.4-7.4°, n20D 1.4401. Similar reduction of MeCH2COCl gave MeCH2CH2OH (V), b70 69.2-9.8°, n20D 1.4394. Treatment of Me2C:CHET with HOCl according to Wilson and Lucas (CA 31, 6578) yielded EtCH2CH2OH (VI), b84 92-4°, n20D 1.4445. Recrystn. from alc. and drying at 70°/0.1 mm. gave C5H11N.HCl, m. 242°. Other amine HCl salts were recrystd. from MeOH-Et2O mixts. III b15 146°, m. 36-7°. Interaction of 2 moles C5H11N and 1 mole IV 16 hrs. at 140° in vacuo yielded 86% C5H10NCH2CH2OH (VII), b40 105-10°, HCl salt m. 159°. A comparable reaction with V gave 40% C5H10NCH2CH2OH (VIII), b80 118°, n 1.4680; HCl salt m. 117-19°. The infrared spectra of VII and VIII differed slightly but the 2 types of OH groups were indistinguishable. Treatment of 1 mole MeCH2(CSH10N)CH2CO2H (IX); HCl salt m. 152°. All reactions of epoxides with amines were conducted in sealed tubes in vacuo. Reaction products were analyzed for secondary and tertiary amino groups by the dithiocarbamate and potentiometric titration methods, resp. The products resulting from treatment of II with amines at 140° in the presence or absence of catalyst were tabulated. Aminolysis of II occurred with primary alkylamines but not with NHEt2. BUNH2 reacted only in the presence of PhOH. Primary alkylidiamines were more reactive than BUNH2 and yielded both mono- and diducts by reaction with I or 2 moles II. Reaction of CSH10N with II in the presence of 1 mole PhOH 40 hrs. at 140° yielded 100% IX. Equimolar amts. of I and CSH10N heated 16 hrs. at 140° gave 100% VII. Comparable reaction of 1 mole I with 1 mole CSH10N-NH.HCl, 1 mole CSH10N and 0.1 mole PhOH, and 1 mole CSH10N, 0.1 mole PhOH, and 1 mole H2O all gave VII. I (8.32 g.), 11.01 g. III, and 0.43 g. H2O heated 2.5 hrs. at 140° in vacuo, the viscous product distilled at 140°/0.01 with recovery of 11% unreacted I, the residue treated with aqueous NaOH, and extracted with Et2O gave 12.2 g. low polymer ester of a 2:1 epoxide-dicarboxylic acid mixture, v 3530, 1730, 1170 cm.-1. Acidification of the aqueous alkaline extract gave 5.7 g. condensation product, mol. weight 390. II (7.22 g.), 5.54 g. III, and 0.27 g. H2O heated 4 hrs. in vacuo at 140° and the product distilled gave 1.8 g. EtOCH2Me2, b. below 80°, 1.6 g. unidentified product, b0.07 26-37°, and 8.3 g. viscous impure bis(2-hydroxy-2-methyl-3-pentyl)

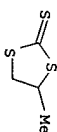


hexahydrophthalate, with infrared spectrum of a hydroxy- or half-ester. PrCMe2OH (X) (2 moles) and 1 mole III heated 4 hrs. at 140° gave 4.7 g. volatile fraction consisting of 0.7 g. PrCMe:CH2 and 3.8 g. EtCH:CHMe2, and 4.1 g. residual hexahydrophthalic acid, m. 182-4°. X (2 moles) heated 4 hrs. with 1 mole (CH2-CO2H)2 at 140° gave 96% (CH2CO2H)2 and 7.15 g. volatile mixture, b. 54-76°, comprising H2O and a mixture of 0.7 g. Pr-CMe:CH2 and 4.8 g. EtCH:CHMe2. Reaction mechanisms were discussed briefly.
 IT 822-38-8. Carbonic acid, trithio-, cyclic ethylene ester (preparation of)
 RN 822-38-8 CAPLUS
 CN 1,3-dithiolane-2-thione (9C1) (CA INDEX NAME)

L7 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
 ACCESSION NUMBER: 1955:55464 CAPLUS
 DOCUMENT NUMBER: 49:55464
 ORIGINAL REFERENCE NO.: 49:10668C-e
 TITLE: Waterproof proteinous adhesives
 INVENTOR(S): Jarvi, Reino A.
 PATENT ASSIGNEE(S): Monsanto Chemical Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2705680		19550405	US	

AB Dry combs. which form water proof plywood adhesives in solution are prepared by mixing a vegetable or animal proteinous material with 0.1-5.0% of an alkyene trithiocarbonate (II). The waterproofing is such that a 3-ply plywood panel bonded with these adhesives can be soaked for 48 hrs. in cold water or for 8 hrs. in boiling water without separation. A typical formulation consists of soybean flour 965 and ethylene trithiocarbonate 10 in pine oil 10 and diesel oil 15 parts. One hundred parts of this composition is dissolved in a mixture of water 342, Ca(OH)2 12, NaOH 8, and com. Na silicate 25 parts. Alkaline comds. may be included in the dry mix. These adhesives have higher dry and wet strengths than similar comps. prepared without I. The I also act as antifloamers and are nonvolatile, relatively nonflammable, and free of objectionable odor.
 IT 3489-45-0, 1,2-Propanedithiol, cyclic thioacetate (mixture with proteins, adhesives from)
 RN 3489-45-0 CAPLUS
 CN 1,3-dithiolane-2-thione, 4-methyl- (9C1) (CA INDEX NAME)



=> S TRITHIOCAR? AND POLY? AND (TOUG? OR HARD? OR VINYL OR RESIN OR UNSAT? OR ACRYL? OR METHACR?)
 1627 TRITHIOCAR?
 3807615 POLY?

94521 TONG?
557645 HARD?
399062 VINYL
569 VINYL
399226 VINYL
(VINYL OR VINYL)
58116 RESIN
392633 RESINS
722276 RESIN
(RESIN OR RESINS)
257023 UNSAT?
449249 ACRYL?
259040 METHACR?
131 TRITHIOCAR? AND POLY? AND (TONG? OR HARD? OR VINYL OR RESIN OR
UNSAT? OR ACRYL? OR METHACR?)

=> S L8 AND EPOXY
226438 EPOXY
2531 EPOXIES
226759 EPOXY
(EPOXY OR EPOXIES)

L9 11 L8 AND EPOXY

=> D 1-11 IBIB ABS

L9 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60003 CAPLUS
DOCUMENT NUMBER: 142:135563
TITLE: Toughened vinyl ester
resins

INVENTOR(S): Lepilleur, Carole A.; Egan, David R.; Weber, Carl D.
PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 57 pp., Cont.-in-part of U.S.
Ser. No. 681,679.
CODEN: USKXCO
Patent English

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

US 2005014910 A1 20050120 2004-782363 20040219
US 6396899 B1 20030722 US 2000-505749 20000216
US 2003187138 A1 20031002 US 2002-219403 20020815
US 6894116 B2 20050517
US 2003120101 A1 20030626 US 2002-278335 20021023
US 2004073056 A1 20040415 US 2003-681679 20031008
WO 2005080326 A1 20050901 WO 2005-USA527 20050214

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GN, GR, GU, HT, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RM: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GT, GW, GM, ML, MR, NE, NG, SN, TD, TG

US 2005267274 A1 20051201 US 2005-192282 20050728
PRIORITY APPLN. INFO.: US 2000-505749 A2 20000216
US 2002-219403 A2 20020815
US 2002-278335 A2 20021023
US 2003-681679 A2 20031008

APPLICANTS

AB A vinyl ester resin is derived from the reaction of an unsat. acid with an epoxy terminated polymer made from a ditlho or a trithio initiator, and optionally from an epoxy resin. The vinyl ester resin can be blended with a miscible toughener and a diluent to provide a time stable system and subsequently crosslink to provide a composition with improved toughening properties. Thus, polymerizing by acrylate in the presence of 5,5'-bis(α,α' -dimethyl- α'' -acetic acid) trithiocarbonate initiator gave a carboxy-terminated polymer which was used as toughener for a vinyl ester resin.

US 2003-429323 A3 20030505
US 2004-782363 A 20040219

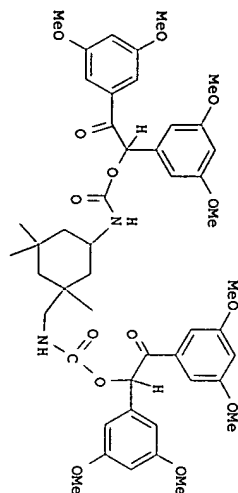
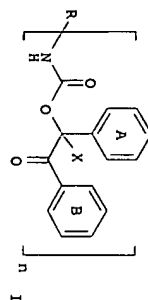
L9 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:97511 CAPLUS
DOCUMENT NUMBER: 140:147287
TITLE: Carbamic acid esters, base generators as curing agents, compositions reactive to bases, and applications of the compositions and their cured products

INVENTOR(S): Utsu, Hiromi; Toriumi, Suguru; Miki, Yasuaki
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
Jpn. Kokai Tokyo Koho, 11 pp.
CODEN: JKXXAF
Patent Japanese

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

PATENT NO. 1

KIND DATE APPLICATION NO. DATE
A2 20040205 JP 2002-190103 20020628
JP 2004035413
PRIORITY APPLN. INFO.: MARPAT 140:147287
OTHER SOURCE(S):



AB The esters are I (R = n-valent organic group; n = 2-10; X = H, Cl-10 hydrocarbyl, Cl-10 alkoxy, halo; A and B may contain substituents). The composites, showing good curability, are useful for sealants and adhesives, and the cured products are useful for optical materials and laminates. Thus, a composition comprising 4,4'-bis(2-hydroxyethoxy)diphenylsulfone dichloroacetyl ether and II was applied on a PET film and cured by UV irradiation to give a transparent layer.

L9 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:777421 CAPLUS
DOCUMENT NUMBER: 139:277550
TITLE: S,S'-bis-(α,α' -disubstituted- α' -acetic acid)-trithiocarbonates and polymers thereof for toughening

INVENTOR(S): thermosetting resins
Lai, John Ta-Yuan; Lepilleur, Carole Angele; Weber, Carl Duane; Egan, David Richard; Filla, Deborah Susan
PATENT ASSIGNEE(S): Novone IP Holdings Corp., USA
SOURCE: U.S. Pat. Appl. Publ. No. 2003/013006, Cont.-in-part of U.S. 6,596,899.

DOCUMENT TYPE: CODEN: USXCO
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: English
PATENT INFORMATION: 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003187136	A1	20031002	US 2002-219403	20020815
US 6894116	B2	20050517		
US 6596899	B1	20030722	US 2000-505749	200000216
US 200333006	A1	20031218	US 2003-429323	20030505
US 6962861	B2	20051108		
US 2005014910	A1	20050120	US 2004-782363	20040219
US 2005009999	A1	20050113	US 2004-913972	20040806
US 2005267274	A1	20051201	US 2005-192882	20050728
PRIORITY APPLN. INFO.:			AZ 2000-505749	AZ 20000216

APPLICANTS

AB A toughener comprising a trithiocarbonate polymer having an epoxy end group is described which is utilized with various thermosettable polymers such as epoxy, polyurethane, and the like. A toughened composition is made by curing the thermosettable polymer and the toughener utilizing various curing agents.

L9 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:411926 CAPLUS
DOCUMENT NUMBER: 139:8231
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKKXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 200315454	A2	20030530	JP 2001-353753	20011119
PRIORITY APPLN. INFO.:			JP 2001-353753	20011119
AB The coatings contain (a) 5-30% (as solid) water-thinned polymer dispersions, (b) 0.1-20% silica particles, and (c) 0.01-5% guanidine compounds. Thus, a water-thinned composition containing (a) a reaction product of bisphenol A diglycidyl ether, and 3-glycidyloxypropylmethyldimethoxysilane, (b) Snowex N (silica), and (c) dipropoxybis(triethanolamino)titanium, thionurea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.				

L9 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:411923 CAPLUS
DOCUMENT NUMBER: 139:8228
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKKXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 200315451	A2	20030530	JP 2001-353750	20011119
PRIORITY APPLN. INFO.:			JP 2001-353750	20011119
OTHER SOURCE(S):				
AB The coatings contain (a) 5-30% (as solid) water-thinned polymer dispersions, (b) 0.1-20% silica particles, and (c) 0.01-20% organic titanates. Thus, a water-thinned composition containing (a) a reaction product of				

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE:
DOCUMENT TYPE:

L9 ANSWER 10 OF 11
ACCESSION NUMBER:
DOCUMENT NUMBER:
ORIGINAL REFERENCE NO.:
TITLE:
65:36418
65:6748e-9
CAPUS 1966:436418 CAPUS
CAPUS 2006 ACS on STN
Electroplating process and self-regulating
electroplating bath
Michael, Gregor
DEHYAG Deutsche Hydrierwerke G.m.b.H.
5 pp.
Patent

=> LOGOFF ALL LH QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF LOGOFF? (Y)/N/HOLD:Y			
COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
FULL ESTIMATED COST	ENTRY	SESSION	
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL	
	ENTRY	SESSION	
	ENTRY	TOTAL	

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STN INTERNATIONAL LOGOFF AT 10:26:06 ON 22 FEB 2006